The chemical evolution of oligonucleotide therapies of o

Nature Biotechnology 35, 238-248 DOI: 10.1038/nbt.3765

Citation Report

#	Article	IF	CITATIONS
1	5Î,"-Vinylphosphonate improves tissue accumulation and efficacy of conjugated siRNAs in vivo. Nucleic Acids Research, 2017, 45, 7581-7592.	6.5	83
2	DDQ mediated regiospecific protection of primary alcohol and deprotection under neutral conditions: Application of new p -methoxy benzyl-pixyl ether as reagent of choice for nucleoside protection. Tetrahedron Letters, 2017, 58, 2588-2591.	0.7	8
3	Analysis of aptamer discovery and technology. Nature Reviews Chemistry, 2017, 1, .	13.8	566
4	MicroRNAs in Heart Failure, Cardiac Transplantation, and Myocardial Recovery: Biomarkers with Therapeutic Potential. Current Heart Failure Reports, 2017, 14, 454-464.	1.3	48
5	Induction of RNAi Responses by Short Left-Handed Hairpin RNAi Triggers. Nucleic Acid Therapeutics, 2017, 27, 260-271.	2.0	4
6	Pharmacokinetic Profiling of Conjugated Therapeutic Oligonucleotides: A High-Throughput Method Based Upon Serial Blood Microsampling Coupled to Peptide Nucleic Acid Hybridization Assay. Nucleic Acid Therapeutics, 2017, 27, 323-334.	2.0	37
7	Synthesis of $2\hat{a} \in 2$ -O-monohaloethoxymethyl-modified RNAs and their duplex formation ability. RSC Advances, 2017, 7, 41297-41303.	1.7	1
8	Amide linkages mimic phosphates in RNA interactions with proteins and are well tolerated in the guide strand of short interfering RNAs. Nucleic Acids Research, 2017, 45, 8142-8155.	6.5	33
9	RNA interference for glioblastoma therapy: Innovation ladder from the bench to clinical trials. Life Sciences, 2017, 188, 26-36.	2.0	47
10	Accurately Modeling the Conformational Preferences of Nucleosides. Journal of the American Chemical Society, 2017, 139, 13620-13623.	6.6	28
11	4′- <i>C</i> -Methoxy-2′-deoxy-2′-fluoro Modified Ribonucleotides Improve Metabolic Stability and Elicit Efficient RNAi-Mediated Gene Silencing. Journal of the American Chemical Society, 2017, 139, 14542-14555.	6.6	49
12	Analysis of mononucleotides by tandem mass spectrometry: investigation of fragmentation pathways for phosphate- and ribose-modified nucleotide analogues. Scientific Reports, 2017, 7, 8931.	1.6	30
13	Antisense oligonucleotide and thyroid hormone conjugates for obesity treatment. Scientific Reports, 2017, 7, 9307.	1.6	11
14	Selective Therapeutic Intervention: A Challenge against Off-Target Effects. Trends in Molecular Medicine, 2017, 23, 671-674.	3.5	8
15	Synthesis and biological properties of triazole-linked locked nucleic acid. Chemical Communications, 2017, 53, 8906-8909.	2.2	32
16	Locked Nucleic Acid Gapmers and Conjugates Potently Silence ADAM33, an Asthma-Associated Metalloprotease with Nuclear-Localized mRNA. Molecular Therapy - Nucleic Acids, 2017, 8, 158-168.	2.3	25
17	Recent advances in uveal melanoma treatment. Medicinal Research Reviews, 2017, 37, 1350-1372.	5.0	23
18	Biomaterials for polynucleotide delivery to anchorage-independent cells. Journal of Materials Chemistry B, 2017, 5, 7238-7261.	2.9	18

#	Article	IF	CITATIONS
19	Precision Tuning of DNA- and Poly(ethylene glycol)-Based Nanoparticles via Coassembly for Effective Antisense Gene Regulation. Chemistry of Materials, 2017, 29, 9882-9886.	3.2	34
20	Influenza virus segment 5 (+)RNA - secondary structure and new targets for antiviral strategies. Scientific Reports, 2017, 7, 15041.	1.6	13
21	Nucleic acid binding proteins affect the subcellular distribution of phosphorothioate antisense oligonucleotides. Nucleic Acids Research, 2017, 45, 10649-10671.	6.5	50
22	As Technologies for Nucleotide Therapeutics Mature, Products Emerge. Molecular Therapy - Nucleic Acids, 2017, 9, 379-386.	2.3	24
23	Quantitative analysis of imetelstat in plasma with LC–MS/MS using solid-phase or hybridization extraction. Bioanalysis, 2017, 9, 1859-1872.	0.6	19
24	Nucleic Acid Aptamers: Emerging Applications in Medical Imaging, Nanotechnology, Neurosciences, and Drug Delivery. International Journal of Molecular Sciences, 2017, 18, 2430.	1.8	71
25	Toward the Selection of Cell Targeting Aptamers with Extended Biological Functionalities to Facilitate Endosomal Escape of Cargoes. Biomedicines, 2017, 5, 51.	1.4	25
26	Guidelines for Rational Cancer Therapeutics. Frontiers in Oncology, 2017, 7, 310.	1.3	4
27	Loading of Extracellular Vesicles with Chemically Stabilized Hydrophobic siRNAs for the Treatment of Disease in the Central Nervous System. Bio-protocol, 2017, 7, .	0.2	9
28	The Molecular Industrial Revolution: Automated Synthesis of Small Molecules. Angewandte Chemie - International Edition, 2018, 57, 4192-4214.	7.2	150
29	Synergy of Two Highly Specific Biomolecular Recognition Events: Aligning an AT-Hook Peptide in DNA Minor Grooves via Covalent Conjugation to 2′-Amino-LNA. Bioconjugate Chemistry, 2018, 29, 1025-1029.	1.8	7
30	Efficient Synthesis of Lightâ€Triggered Circular Antisense Oligonucleotides Targeting Cellular Protein Expression. ChemBioChem, 2018, 19, 1250-1254.	1.3	27
31	Therapeutic oligonucleotides in cardiovascular and metabolic diseases: insights for the internist. Internal and Emergency Medicine, 2018, 13, 313-318.	1.0	4
32	Bioengineered Noncoding RNAs Selectively Change Cellular miRNome Profiles for Cancer Therapy. Journal of Pharmacology and Experimental Therapeutics, 2018, 365, 494-506.	1.3	46
33	Efficient Gene Silencing in Brain Tumors with Hydrophobically Modified siRNAs. Molecular Cancer Therapeutics, 2018, 17, 1251-1258.	1.9	14
34	Tapping the RNA world for therapeutics. Nature Structural and Molecular Biology, 2018, 25, 357-364.	3.6	147
35	Self-Delivering RNAi Targeting PD-1 Improves Tumor-Specific T Cell Functionality for Adoptive Cell Therapy of Malignant Melanoma. Molecular Therapy, 2018, 26, 1482-1493.	3.7	38
36	Aptamer chemistry. Advanced Drug Delivery Reviews, 2018, 134, 3-21.	6.6	258

#	Article	IF	CITATIONS
37	Breast milk microRNAs harsh journey towards potential effects in infant development and maturation. Lipid encapsulation can help. Pharmacological Research, 2018, 132, 21-32.	3.1	54
38	Comparison of partially and fully chemically-modified siRNA in conjugate-mediated delivery in vivo. Nucleic Acids Research, 2018, 46, 2185-2196.	6.5	125
39	Acute hepatotoxicity of 2′ fluoro-modified 5–10–5 gapmer phosphorothioate oligonucleotides in mice correlates with intracellular protein binding and the loss of DBHS proteins. Nucleic Acids Research, 2018, 46, 2204-2217.	6.5	71
40	Therapeutic Targeting of Long Non-Coding RNAs in Cancer. Trends in Molecular Medicine, 2018, 24, 257-277.	3.5	453
41	MicroRNA-Based Drugs for Brain Tumors. Trends in Cancer, 2018, 4, 222-238.	3.8	54
42	C2′-F Stereoconfiguration As a Puckering Switch for Base Stacking at the Dinucleotide Level. Journal of Organic Chemistry, 2018, 83, 2473-2478.	1.7	4
43	miRNA displacement as a promising approach for cancer therapy. Molecular and Cellular Oncology, 2018, 5, e1406432.	0.3	5
44	Loading of Extracellular Vesicles with Hydrophobically Modified siRNAs. Methods in Molecular Biology, 2018, 1740, 199-214.	0.4	13
45	Current Status of Nonviral Vectors for Gene Therapy in China. Human Gene Therapy, 2018, 29, 110-120.	1.4	16
46	Impact of a five-dimensional framework on R&D productivity at AstraZeneca. Nature Reviews Drug Discovery, 2018, 17, 167-181.	21.5	294
47	Towards the generalized iterative synthesis of small molecules. Nature Reviews Chemistry, 2018, 2, .	13.8	94
48	Cholesterol–GalNAc Dual Conjugation Strategy for Reducing Renal Distribution of Antisense Oligonucleotides. Nucleic Acid Therapeutics, 2018, 28, 50-57.	2.0	15
49	Non-protein biologic therapeutics. Current Opinion in Biotechnology, 2018, 53, 65-75.	3.3	18
50	MicroRNAs as therapeutic targets for the treatment of diabetes mellitus and its complications. Expert Opinion on Therapeutic Targets, 2018, 22, 153-160.	1.5	71
51	Circular DNA: a stable probe for highly efficient mRNA imaging and gene therapy in living cells. Chemical Communications, 2018, 54, 896-899.	2.2	16
52	Oligonucleotides targeting TCF4 triplet repeat expansion inhibit RNA foci and mis-splicing in Fuchs' dystrophy. Human Molecular Genetics, 2018, 27, 1015-1026.	1.4	51
53	A Sensitive InÂVitro Approach to Assess the Hybridization-Dependent Toxic Potential of High Affinity Gapmer Oligonucleotides. Molecular Therapy - Nucleic Acids, 2018, 10, 45-54.	2.3	49
54	Chemical modifications of nucleic acid drugs and their delivery systems for geneâ€based therapy. Medicinal Research Reviews, 2018, 38, 829-869.	5.0	108

#	Article	IF	CITATIONS
55	Chemistry, mechanism and clinical status of antisense oligonucleotides and duplex RNAs. Nucleic Acids Research, 2018, 46, 1584-1600.	6.5	487
56	Development of Protecting Groups for Prodrug-Type Oligonucleotide Medicines. Chemical and Pharmaceutical Bulletin, 2018, 66, 147-154.	0.6	7
57	Triplex Formation by Oligonucleotides Containing Organomercurated Base Moieties. ChemBioChem, 2018, 19, 1096-1101.	1.3	13
58	From "Cellular―RNA to "Smart―RNA: Multiple Roles of RNA in Genome Stability and Beyond. Chemical Reviews, 2018, 118, 4365-4403.	23.0	63
59	Rational design and biomedical applications of DNA-functionalized upconversion nanoparticles. Chinese Chemical Letters, 2018, 29, 1321-1332.	4.8	26
60	Gene Editing and Gene-Based Therapeutics for Cardiomyopathies. Heart Failure Clinics, 2018, 14, 179-188.	1.0	8
61	Targeting Amyloid-β Precursor Protein, APP, Splicing with Antisense Oligonucleotides Reduces Toxic Amyloid-l² Production. Molecular Therapy, 2018, 26, 1539-1551.	3.7	27
62	Intracerebroventricular Administration of a 2′-O-Methyl Phosphorothioate Antisense Oligonucleotide Results in Activation of the Innate Immune System in Mouse Brain. Nucleic Acid Therapeutics, 2018, 28, 63-73.	2.0	23
63	Artificial cationic oligosaccharides for heteroduplex oligonucleotide-type drugs. Scientific Reports, 2018, 8, 4323.	1.6	15
64	RNA interference therapy for autosomal dominant osteopetrosis type 2. Towards the preclinical development. Bone, 2018, 110, 343-354.	1.4	20
65	Non-coding RNAs in cardiovascular diseases: diagnostic and therapeutic perspectives. European Heart Journal, 2018, 39, 2704-2716.	1.0	300
66	Assessment and comparison of thermal stability of phosphorothioate-DNA, DNA, RNA, 2′-F RNA, and LNA in the context of Phi29 pRNA 3WJ. Rna, 2018, 24, 67-76.	1.6	41
67	Locked nucleic acid: modality, diversity, and drug discovery. Drug Discovery Today, 2018, 23, 101-114.	3.2	153
68	Advances in therapeutic bacterial antisense biotechnology. Applied Microbiology and Biotechnology, 2018, 102, 1055-1065.	1.7	73
69	Nucleic Acid Therapies for Cystic Fibrosis. Nucleic Acid Therapeutics, 2018, 28, 1-9.	2.0	20
70	A sense oligonucleotide to inducible nitric oxide synthase mRNA increases the survival rate of rats in septic shock. Nitric Oxide - Biology and Chemistry, 2018, 72, 32-40.	1.2	9
71	Die molekulare industrielle Revolution: zur automatisierten Synthese organischer Verbindungen. Angewandte Chemie, 2018, 130, 4266-4288.	1.6	21
72	Functional features defining the efficacy of cholesterol-conjugated, self-deliverable, chemically modified siRNAs. Nucleic Acids Research, 2018, 46, 10905-10916.	6.5	48

#	ARTICLE	IF	Citations
73	RNAi modulation of placental sFLT1 for the treatment of preeclampsia. Nature Biotechnology, 2018, 36, 1164-1173.	9.4	126
74	Overview of DNA Self-Assembling: Progresses in Biomedical Applications. Pharmaceutics, 2018, 10, 268.	2.0	19
75	Multiple Exon Skipping in the Duchenne Muscular Dystrophy Hot Spots: Prospects and Challenges. Journal of Personalized Medicine, 2018, 8, 41.	1.1	61
76	Synthetic materials at the forefront of gene delivery. Nature Reviews Chemistry, 2018, 2, 258-277.	13.8	215
77	Lysosomal storage diseases. Nature Reviews Disease Primers, 2018, 4, 27.	18.1	563
78	Circular RNAs as Therapeutic Agents and Targets. Frontiers in Physiology, 2018, 9, 1262.	1.3	134
79	<i>In Situ</i> SiRNA Assembly in Living Cells for Gene Therapy with MicroRNA Triggered Cascade Reactions Templated by Nucleic Acids. ACS Nano, 2018, 12, 10797-10806.	7.3	61
80	Targeted delivery of antisense oligonucleotides to pancreatic β-cells. Science Advances, 2018, 4, eaat3386.	4.7	132
81	Barcoding chemical modifications into nucleic acids improves drug stability <i>in vivo</i> . Journal of Materials Chemistry B, 2018, 6, 7197-7203.	2.9	17
82	Solid-Phase Synthesis of Phosphorothioate Oligonucleotides Using Sulfurization Byproducts for in Situ Capping. Journal of Organic Chemistry, 2018, 83, 11577-11585.	1.7	14
83	Invention and Early History of Exon Skipping and Splice Modulation. Methods in Molecular Biology, 2018, 1828, 3-30.	0.4	17
84	Antisense Oligonucleotide Design and Evaluation of Splice-Modulating Properties Using Cell-Based Assays. Methods in Molecular Biology, 2018, 1828, 519-530.	0.4	5
85	Drug metabolism and pharmacokinetic strategies for oligonucleotide- and mRNA-based drug development. Drug Discovery Today, 2018, 23, 1733-1745.	3.2	40
86	Angubindin-1 opens the blood–brain barrier in vivo for delivery of antisense oligonucleotide to the central nervous system. Journal of Controlled Release, 2018, 283, 126-134.	4.8	51
87	RNA Therapeutics (Almost) Comes of Age: Targeting, Delivery and Endosomal Escape. Nucleic Acid Therapeutics, 2018, 28, 107-108.	2.0	17
88	GalNAc-siRNA Conjugates: Leading the Way for Delivery of RNAi Therapeutics. Nucleic Acid Therapeutics, 2018, 28, 109-118.	2.0	388
89	Selecting Fullyâ€Modified XNA Aptamers Using Synthetic Genetics. Current Protocols in Chemical Biology, 2018, 10, e44.	1.7	16
90	PEGylation of therapeutic oligonucletides: From linear to highly branched PEG architectures. Nano Research, 2018, 11, 5519-5534.	5.8	36

#	Article	IF	CITATIONS
91	Synthesis, Affinity for Complementary RNA and DNA, and Enzymatic Stability of Triazole-Linked Locked Nucleic Acids (t-LNAs). ACS Omega, 2018, 3, 6976-6987.	1.6	14
92	Adjusting the Structure of 2′-Modified Nucleosides and Oligonucleotides via C4′-α-F or C4′-α-OMe Substitution: Synthesis and Conformational Analysis. Journal of Organic Chemistry, 2018, 83, 9839-9849.	1.7	33
94	A Versatile and Convenient Synthesis of ³⁴ S‣abeled Phosphorothioate Oligonucleotides. ChemBioChem, 2018, 19, 2114-2119.	1.3	7
95	Design of synthetic materials for intracellular delivery of RNAs: From siRNA-mediated gene silencing to CRISPR/Cas gene editing. Nano Research, 2018, 11, 5310-5337.	5.8	31
96	Application of 2â€2- <i>O</i> -(2- <i>N</i> -Methylcarbamoylethyl) Nucleotides in RNase H-Dependent Antisense Oligonucleotides. Nucleic Acid Therapeutics, 2018, 28, 307-311.	2.0	10
97	Role of Gene Therapy in Pancreatic Cancer—A Review. Cancers, 2018, 10, 103.	1.7	16
98	Heavily and fully modified RNAs guide efficient SpyCas9-mediated genome editing. Nature Communications, 2018, 9, 2641.	5.8	83
99	Nanoparticle-Mediated Therapeutic Agent Delivery for Treating Metastatic Breast Cancer—Challenges and Opportunities. Nanomaterials, 2018, 8, 361.	1.9	32
100	Synthesis and Properties of 2′-OMe-RNAs Modified with Cross-Linkable 7-Deazaguanosine Derivatives. Journal of Organic Chemistry, 2018, 83, 8851-8862.	1.7	9
101	Covalent Strategies for Targeting Messenger and Non-Coding RNAs: An Updated Review on siRNA, miRNA and antimiR Conjugates. Genes, 2018, 9, 74.	1.0	54
102	The potential of antisense oligonucleotide therapies for inherited childhood lung diseases. Molecular and Cellular Pediatrics, 2018, 5, 3.	1.0	21
103	Targeting RNA in mammalian systems with small molecules. Wiley Interdisciplinary Reviews RNA, 2018, 9, e1477.	3.2	108
104	Improving siRNA Delivery <i>In Vivo</i> Through Lipid Conjugation. Nucleic Acid Therapeutics, 2018, 28, 128-136.	2.0	90
105	Recent preclinical and clinical advances in oligonucleotide conjugates. Expert Opinion on Drug Delivery, 2018, 15, 629-640.	2.4	43
106	Extrahepatic Targeting of Oligonucleotides with Receptor-Binding Non-Immunoglobulin Scaffold Proteins. Nucleic Acid Therapeutics, 2018, 28, 137-145.	2.0	4
107	RNA-mediated therapies in myotonic dystrophy. Drug Discovery Today, 2018, 23, 2013-2022.	3.2	37
108	Applications of Ruthenium Complexes Covalently Linked to Nucleic Acid Derivatives. Molecules, 2018, 23, 1515.	1.7	19
109	Epigenetics in Melanoma. , 2018, , 115-132.		0

#	Article	IF	CITATIONS
110	Novel Cluster and Monomer-Based GalNAc Structures Induce Effective Uptake of siRNAs in Vitro and in Vivo. Bioconjugate Chemistry, 2018, 29, 2478-2488.	1.8	32
111	Efficient RNA drug delivery using red blood cell extracellular vesicles. Nature Communications, 2018, 9, 2359.	5.8	402
112	Oligonucleotide-Based Therapies for Inflammatory Bowel Disease. BioDrugs, 2018, 32, 331-338.	2.2	12
113	Inflammatory bowel disease: new therapies from antisense oligonucleotides. Annals of Medicine, 2018, 50, 361-370.	1.5	14
114	Advances in the Application of Pd-Mediated Transformations in Nucleotides and Oligonucleotides. , 2018, , 269-293.		4
115	Dual Mechanisms of Action of Self-Delivering, Anti-HIV-1 FANA Oligonucleotides as a Potential New Approach to HIV Therapy. Molecular Therapy - Nucleic Acids, 2019, 17, 615-625.	2.3	33
116	Pharmacological lipid-modification therapies for prevention of ischaemic heart disease: current and future options. Lancet, The, 2019, 394, 697-708.	6.3	67
117	Dually Stabilized Triblock Copolymer Micelles with Hydrophilic Shell and Hydrophobic Interlayer for Systemic Antisense Oligonucleotide Delivery to Solid Tumor. ACS Biomaterials Science and Engineering, 2019, 5, 5770-5780.	2.6	21
118	A divalent siRNA chemical scaffold for potent and sustained modulation of gene expression throughout the central nervous system. Nature Biotechnology, 2019, 37, 884-894.	9.4	126
119	Molecular Construction of Sulfonamide Antisense Oligonucleotides. Journal of Organic Chemistry, 2019, 84, 10635-10648.	1.7	4
120	Sequencing of Phosphoramidate Oligonucleotides by Acid Hydrolysis and Mass Spectrometry. Analytical Chemistry, 2019, 91, 11154-11161.	3.2	5
121	The Pharmacokinetics of 2′- <i>O</i> -Methyl Phosphorothioate Antisense Oligonucleotides: Experiences from Developing Exon Skipping Therapies for Duchenne Muscular Dystrophy. Nucleic Acid Therapeutics, 2019, 29, 305-322.	2.0	20
122	Long Noncoding RNAs of the Arterial Wall as Therapeutic Agents and Targets in Atherosclerosis. Thrombosis and Haemostasis, 2019, 119, 1222-1236.	1.8	12
123	Fatty acid conjugation enhances potency of antisense oligonucleotides in muscle. Nucleic Acids Research, 2019, 47, 6029-6044.	6.5	93
124	siRNA nanotherapeutics: a promising strategy for antiâ€HBV therapy. IET Nanobiotechnology, 2019, 13, 457-463.	1.9	8
126	RNA Therapeutics: How Far Have We Gone?. Advances in Experimental Medicine and Biology, 2019, 1157, 133-177.	0.8	35
127	Increased Affinity of 2′―O â€{2â€Methoxyethyl)â€Modified Oligonucleotides to RNA through Conjugation of Spermine at Cytidines. Helvetica Chimica Acta, 2019, 102, e1900222.	1.0	3
128	Tu1012 – Low Rates of Metachronous Advanced Neoplasia in Individuals with Young-Onset Colorectal Cancer. Gastroenterology, 2019, 156, S-946-S-947.	0.6	0

#	Article	IF	CITATIONS
130	Transgenerational Perpetuation of CHS Gene Expression and DNA Methylation Status Induced by Short Oligodeoxynucleotides in Flax (Linum usitatissimum). International Journal of Molecular Sciences, 2019, 20, 3983.	1.8	4
131	Application of 2′-OMethylRNA′ Antisense Oligomer to Control Candida albicans EFG1 Virulence Determinant. Molecular Therapy - Nucleic Acids, 2019, 18, 508-517.	2.3	11
132	Cytochalasin-B-Inducible Nanovesicle Mimics of Natural Extracellular Vesicles That Are Capable of Nucleic Acid Transfer. Micromachines, 2019, 10, 750.	1.4	20
133	Targeting STAT3 in Cancer with Nucleotide Therapeutics. Cancers, 2019, 11, 1681.	1.7	32
134	GREB1 induced by Wnt signaling promotes development of hepatoblastoma by suppressing TGFÎ ² signaling. Nature Communications, 2019, 10, 3882.	5.8	28
135	An update on advances in new developing DNA conjugation diagnostics and ultra-resolution imaging technologies: Possible applications in medical and biotechnological utilities. Biosensors and Bioelectronics, 2019, 144, 111633.	5.3	11
136	Recent advances in polymeric materials for the delivery of RNA therapeutics. Expert Opinion on Drug Delivery, 2019, 16, 1149-1167.	2.4	46
137	Comparison of PEGylated and non-PEGylated proticles: An in vitro and in vivo study. European Journal of Pharmaceutical Sciences, 2019, 139, 105063.	1.9	8
138	Discovery of indoline derivatives that inhibit esophageal squamous cell carcinoma growth by Noxa mediated apoptosis. Bioorganic Chemistry, 2019, 92, 103190.	2.0	4
139	Molecular Dynamics Study of the Hybridization between RNA and Modified Oligonucleotides. Journal of Chemical Theory and Computation, 2019, 15, 6422-6432.	2.3	17
140	Synthesis of 2′- <i>C</i> ,4′- <i>C</i> -Methyleneoxy-Bridged Thymidine Derivatives and Properties of Modified Oligonucleotides. Journal of Organic Chemistry, 2019, 84, 13336-13344.	1.7	8
141	Advances and challenges in studying noncoding RNA regulation of drug metabolism and development of RNA therapeutics. Biochemical Pharmacology, 2019, 169, 113638.	2.0	40
142	A Green Chemistry Continuum for a Robust and Sustainable Active Pharmaceutical Ingredient Supply Chain. ACS Sustainable Chemistry and Engineering, 2019, 7, 16937-16951.	3.2	37
143	Linkage between endosomal escape of LNP-mRNA and loading into EVs for transport to other cells. Nature Communications, 2019, 10, 4333.	5.8	211
144	Effect of surface charge on the size-dependent cellular internalization of liposomes. Chemistry and Physics of Lipids, 2019, 224, 104726.	1.5	26
145	Hydrophobicity drives the systemic distribution of lipid-conjugated siRNAs via lipid transport pathways. Nucleic Acids Research, 2019, 47, 1070-1081.	6.5	87
146	Nanoparticle Delivery of miR-708 Mimetic Impairs Breast Cancer Metastasis. Molecular Cancer Therapeutics, 2019, 18, 579-591.	1.9	56
147	Current Aspects of siRNA Bioconjugate for In Vitro and In Vivo Delivery. Molecules, 2019, 24, 2211.	1.7	62

#	Article	IF	CITATIONS
148	2′-C,4′-C-Ethyleneoxy-Bridged 2′-Deoxyribonucleic Acids (EoDNAs) with Thymine Nucleobases: Synthesis, Duplex-Forming Ability, and Enzymatic Stability. Methods in Molecular Biology, 2019, 1973, 59-89.	0.4	1
149	Long Non-coding RNAs in Vascular Health and Disease. , 2019, , 151-179.		0
150	Noncoding RNAs in cancer therapy resistance and targeted drug development. Journal of Hematology and Oncology, 2019, 12, 55.	6.9	193
151	Bioengineering of a single long noncoding RNA molecule that carries multiple small RNAs. Applied Microbiology and Biotechnology, 2019, 103, 6107-6117.	1.7	21
152	Influence of lysine residue in amphipathic helical peptides on targeted delivery of RNA into cancer cells. Bioorganic and Medicinal Chemistry Letters, 2019, 29, 1934-1937.	1.0	5
153	Convertible and conformationally constrained nucleic acids (C ₂ NAs). Organic and Biomolecular Chemistry, 2019, 17, 6386-6397.	1.5	2
154	Beyond DNA and RNA: The Expanding Toolbox of Synthetic Genetics. Cold Spring Harbor Perspectives in Biology, 2019, 11, a032490.	2.3	46
156	New Catalytic Asymmetric Formation of Oxygen Heterocycles Bearing Nucleoside Bases at the Anomeric Carbon. Journal of the American Chemical Society, 2019, 141, 10199-10204.	6.6	21
157	Evolving methods for rational de novo design of functional RNA molecules. Methods, 2019, 161, 54-63.	1.9	6
158	Mind the gap!. Nature Biotechnology, 2019, 37, 622-623.	9.4	2
159	Targeted delivery and endosomal cellular uptake of DARPin-siRNA bioconjugates: Influence of linker stability on gene silencing. European Journal of Pharmaceutics and Biopharmaceutics, 2019, 141, 37-50.	2.0	10
160	Hyaluronan-based delivery of therapeutic oligonucleotides for treatment of human diseases. Expert Opinion on Drug Delivery, 2019, 16, 621-637.	2.4	7
161	Synthesis and biophysical properties of carbamate-locked nucleic acid (LNA) oligonucleotides with potential antisense applications. Organic and Biomolecular Chemistry, 2019, 17, 5341-5348.	1.5	12
162	Targeted Oligonucleotides for Treating Neurodegenerative Tandem Repeat Diseases. Neurotherapeutics, 2019, 16, 248-262.	2.1	18
163	miR-125b Upregulates miR-34a and Sequentially Activates Stress Adaption and Cell Death Mechanisms in Multiple Myeloma. Molecular Therapy - Nucleic Acids, 2019, 16, 391-406.	2.3	30
164	Function and Mechanism of Long Noncoding RNAs in Adipocyte Biology. Diabetes, 2019, 68, 887-896.	0.3	65
165	Current Development of siRNA Bioconjugates: From Research to the Clinic. Frontiers in Pharmacology, 2019, 10, 444.	1.6	147
166	Synthesis and Conformation of Pentopyranoside Nucleoside Phosphonates. Journal of Organic Chemistry, 2019, 84, 6589-6603.	1.7	4

#	Article	IF	CITATIONS
167	Chemical modification of PS-ASO therapeutics reduces cellular protein-binding and improves the therapeutic index. Nature Biotechnology, 2019, 37, 640-650.	9.4	205
168	Synthesis and Enzymatic Characterization of Sugar-Modified Nucleoside Triphosphate Analogs. Methods in Molecular Biology, 2019, 1973, 1-13.	0.4	0
169	RNAi therapeutic and its innovative biotechnological evolution. Biotechnology Advances, 2019, 37, 801-825.	6.0	196
170	Nucleic Acid Therapeutics for Neurological Diseases. Neurotherapeutics, 2019, 16, 245-247.	2.1	16
171	Modification of oligonucleotides with weak basic residues <i>via</i> the 2′- <i>O</i> -carbamoylethyl linker for improving nuclease resistance without loss of duplex stability and antisense activity. Organic and Biomolecular Chemistry, 2019, 17, 4835-4842.	1.5	3
172	Suppressing nNOS Enzyme by Small-Interfering RNAs Protects SH-SY5Y Cells and Nigral Dopaminergic Neurons from 6-OHDA Injury. Neurotoxicity Research, 2019, 36, 117-131.	1.3	13
173	Dextran-Conjugated Caged siRNA Nanoparticles for Photochemical Regulation of RNAi-Induced Gene Silencing in Cells and Mice. Bioconjugate Chemistry, 2019, 30, 1459-1465.	1.8	18
174	Rationally Designed Anti-CRISPR Nucleic Acid Inhibitors of CRISPR-Cas9. Nucleic Acid Therapeutics, 2019, 29, 136-147.	2.0	26
175	Uptake and Fate of Fluorescently Labeled DNA Nanostructures in Cellular Environments: A Cautionary Tale. ACS Central Science, 2019, 5, 882-891.	5.3	134
176	From herbal small RNAs to one medicine. Science China Life Sciences, 2019, 62, 285-287.	2.3	5
177	Synthesis of 6′â€Methylâ€2′â€ <i>O</i> ,4′â€ <i>C</i> â€methyleneâ€ <i>α</i> ‣―ribofuranosylâ€pyr ChemistrySelect, 2019, 4, 3241-3246.	imidine Nu 0.7	clgosides.
178	Further Probing of Cu2+-Dependent PNAzymes Acting as Artificial RNA Restriction Enzymes. Molecules, 2019, 24, 672.	1.7	9
179	Therapeutic Oligonucleotides Against Cancer: Recent Approaches and New Perspectives. , 2019, , 1-26.		4
180	Stressing the Role of DNA as a Drug Carrier: Synthesis of DNA–Drug Conjugates through Grafting Chemotherapeutics onto Phosphorothioate Oligonucleotides. Advanced Materials, 2019, 31, e1807533.	11.1	75
181	The current state and future directions of RNAi-based therapeutics. Nature Reviews Drug Discovery, 2019, 18, 421-446.	21.5	896
182	Synthesis and Biophysical Characterization of RNAs Containing (<i>R</i>)- and (<i>S</i>)-5â€2- <i>C</i> -Aminopropyl-2â€2- <i>O</i> -methyluridines. Journal of Organic Chemistry, 2019, 84, 3388-3404.	1.7	12
184	Mirrorâ€Image Oligonucleotides: History and Emerging Applications. Chemistry - A European Journal, 2019, 25, 7981-7990.	1.7	54
185	Identification and characterization of the IncRNA signature associated with overall survival in patients with neuroblastoma. Scientific Reports, 2019, 9, 5125.	1.6	24

		CITATION REPORT	
#	Article	IF	CITATIONS
186	RNA Biology Provides New Therapeutic Targets for Human Disease. Frontiers in Genetics, 2019, 10, 205.	1.1	42
187	Metastable Dumbbell Probe-Based Hybridization Chain Reaction for Sensitive and Accurate Imaging of Intracellular-Specific MicroRNAs In Situ in Living Cells. Analytical Chemistry, 2019, 91, 4625-4631.	3.2	31
188	Synthesis of a Protected <i>keto</i> -Lysidine Analogue via Improved Preparation of <i>Arabino</i> -isoCytosine Nucleosides. Organic Letters, 2019, 21, 2004-2007.	2.4	3
189	Covalent Fluorophore Labeling of Oligonucleotides and Generation of Other Oligonucleotide Bioconjugates. Methods in Molecular Biology, 2019, 1943, 61-72.	0.4	0
190	Antisense Oligonucleotides for the Treatment of Inner Ear Dysfunction. Neurotherapeutics, 2019, 16, 348-359.	2.1	16
191	Oligonucleotide–Palladacycle Conjugates as Splice-Correcting Agents. Molecules, 2019, 24, 1180.	1.7	10
192	Hybrid Nucleic Acid Nanocapsules for Targeted, Enzyme-Specific Drug Delivery and Intracellular Gene Regulation. ACS Symposium Series, 2019, , 59-77.	0.5	1
193	Terminal Deoxynucleotidyl Transferase-Catalyzed Preparation of pH-Responsive DNA Nanocarriers for Tumor-Targeted Drug Delivery and Therapy. ACS Applied Materials & Interfaces, 2019, 11, 14684-14692.	4.0	38
194	Recent advances in developing PCSK9 inhibitors for lipid-lowering therapy. Future Medicinal Chemistry, 2019, 11, 423-441.	1.1	18
195	Targeting <scp>RNA</scp> : A Transformative Therapeutic Strategy. Clinical and Translational Science, 2019, 12, 98-112.	1.5	102
196	Characteristics of ribonucleic acid. , 2019, , 43-50.		0
197	Impaired kidney structure and function in spinal muscular atrophy. Neurology: Genetics, 2019, 5, e353.	0.9	28
198	Nucleic acid medicines as green novel anticancer drugs. , 2019, , 131-149.		1
199	Polymeric Nanoparticles Based on Tyrosine-Modified, Low Molecular Weight Polyethylenimines for siRNA Delivery. Pharmaceutics, 2019, 11, 600.	2.0	24
200	ALS Genetics, Mechanisms, and Therapeutics: Where Are We Now?. Frontiers in Neuroscience, 2019, 13, 1310.	1.4	487
201	Mercury-Free Automated Synthesis of Guanidinium Backbone Oligonucleotides. Journal of the American Chemical Society, 2019, 141, 20171-20176.	6.6	14
202	Gene Silencing With siRNA (RNA Interference): A New Therapeutic Option During Ex Vivo Machine Liver Perfusion Preservation. Liver Transplantation, 2019, 25, 140-151.	1.3	47
203	Chemical Synthesis of Proteins that cannot be Obtained Recombinantly. Israel Journal of Chemistry, 2019, 59, 64-70.	1.0	14

ARTICLE IF CITATIONS # Synthesis of (<i>R</i>)- and (<i>S</i>)-Fmoc-Protected Diethylene Glycol Gamma PNA Monomers with 204 1.7 7 High Optical Purity. Journal of Organic Chemistry, 2019, 84, 1276-1287. Fluorophore Labeling Affects the Cellular Accumulation and Gene Silencing Activity of Cholesterol-Modified siRNAs <i>In Vitro</i>. Nucleic Acid Therapeutics, 2019, 29, 33-43. Terminal Deoxynucleotidyl Transferase in the Synthesis and Modification of Nucleic Acids. 206 1.3 56 ChemBioChem, 2019, 20, 860-871. Bioconjugated Oligonucleotides: Recent Developments and Therapeutic Applications. Bioconjugate 1.8 Chemistry, 2019, 30, 366-383. Hidden sequence specificity in loading of single-stranded RNAs onto<i>Drosophila</i>Argonautes. 208 6.5 8 Nucleic Acids Research, 2019, 47, 3101-3116. Oligonucleotide Therapeutics as a New Class of Drugs for Malignant Brain Tumors: Targeting mRNAs, Regulatory RNAs, Mutations, Combinations, and Beyond. Neurotherapeutics, 2019, 16, 319-347. 209 2.1 Chemically Modified Antisense Oligonucleotide Against ARL4C Inhibits Primary and Metastatic Liver 210 1.9 42 Tumor Growth. Molecular Cancer Therapeutics, 2019, 18, 602-612. Molecular mechanisms of long noncoding RNAsâ€mediated cancer metastasis. Genes Chromosomes and 211 1.5 Cancer, 2019, 58, 200-207. 212 RNA therapy: Are we using the right molecules?., 2019, 196, 91-104. 116 RNA Reduction and Hepatotoxic Potential Caused by Non-Gapmer Antisense Oligonucleotides. Nucleic Acid Therapeutics, 2019, 29, 44-50. Therapeutic Oligonucleotides: State of the Art. Annual Review of Pharmacology and Toxicology, 2019, 214 208 4.2 59, 605-630. LncRNAs in vascular biology and disease. Vascular Pharmacology, 2019, 114, 145-156. 1.0 133 Effect of modular conjugation strategy for <i>N</i>/i>-acetylgalactosamine-targeted antisense 216 0.4 6 oligonucleotides. Nucleosides, Nucleotides and Nucleic Acids, 2020, 39, 109-118. Ethylcellulose nanoparticles as a new "in vitro―transfection tool for antisense oligonucleotide delivery. Carbohydrate Polymers, 2020, 229, 115451. 217 5.1 14 Synthesis of selenomethylene-locked nucleic acids (SeLNA) nucleoside unit bearing an adenine base. 218 2 0.4 Nucleosides, Nucleotides and Nucleic Acids, 2020, 39, 131-140. Lipoplex-based therapeutics for effective oligonucleotide delivery: a compendious review. Journal of Liposome Research, 2020, 30, 313-335. Leading RNA Interference Therapeutics Part 1: Silencing Hereditary Transthyretin Amyloidosis, with a 220 1.6 35 Focus on Patisiran. Molecular Diagnosis and Therapy, 2020, 24, 49-59. RNA interference therapeutics in organ transplantation: The dawn of a new era. American Journal of Transplantation, 2020, 20, 931-941.

#	Article	IF	CITATIONS
222	Gapmer Antisense Oligonucleotides Containing 2′,3′â€Dideoxyâ€2′â€fluoroâ€3′―C â€hydroxymet Nucleotides Display Site‧pecific RNaseâ€H Cleavage and Induce Gene Silencing. Chemistry - A European Journal, 2020, 26, 1368-1379.	hylâ€Î²â€• 1.7	d ″yxofuran 7
223	Deoxyribozymeâ€Based DNA Machines for Cancer Therapy. ChemBioChem, 2020, 21, 607-611.	1.3	16
224	Alternative Splicing of Nrcam Gene in Dorsal Root Ganglion Contributes to Neuropathic Pain. Journal of Pain, 2020, 21, 892-904.	0.7	16
225	Searching for the ideal triazole: Investigating the 1,5-triazole as a charge neutral DNA backbone mimic. Tetrahedron, 2020, 76, 130914.	1.0	7
226	Synthesis and Properties of Oligonucleotides Having Ethynylphosphonate Linkages. Journal of Organic Chemistry, 2020, 85, 1794-1801.	1.7	5
227	Nucleobase derivatives induce inâ€source decay of oligonucleotides as new matrixâ€assisted laser desorption/ionization matrices. Rapid Communications in Mass Spectrometry, 2020, 34, e8620.	0.7	4
228	The Evolving Druggability and Developability Space: Chemically Modified New Modalities and Emerging Small Molecules. AAPS Journal, 2020, 22, 21.	2.2	32
229	Chemical Diversity of Locked Nucleic Acid-Modified Antisense Oligonucleotides Allows Optimization of Pharmaceutical Properties. Molecular Therapy - Nucleic Acids, 2020, 19, 706-717.	2.3	28
230	Therapies for rare diseases: therapeutic modalities, progress and challenges ahead. Nature Reviews Drug Discovery, 2020, 19, 93-111.	21.5	190
231	Oligonucleotides to the (Gene) Rescue: FDA Approvals 2017–2019. Trends in Pharmacological Sciences, 2020, 41, 27-41.	4.0	66
232	Insight into the siRNA transmembrane delivery—From cholesterol conjugating to tagging. Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology, 2020, 12, e1606.	3.3	16
233	In vitro and in vivo properties of therapeutic oligonucleotides containing non-chiral 3′ and 5′ thiophosphate linkages. Nucleic Acids Research, 2020, 48, 63-74.	6.5	15
234	<p>Long Non-Coding RNAs in Brown Adipose Tissue</p> . Diabetes, Metabolic Syndrome and Obesity: Targets and Therapy, 2020, Volume 13, 3193-3204.	1.1	9
235	Targeted Therapy of Hepatocellular Carcinoma Using Gemcitabine-Incorporated GPC3 Aptamer. Pharmaceutics, 2020, 12, 985.	2.0	8
236	Factor XII/XIIa inhibitors: Their discovery, development, and potential indications. European Journal of Medicinal Chemistry, 2020, 208, 112753.	2.6	34
237	Development of Bioreduction Labile Protecting Groups for the 2′-Hydroxyl Group of RNA. Organic Letters, 2020, 22, 6006-6009.	2.4	3
238	Amide-Modified RNA: Using Protein Backbone to Modulate Function of Short Interfering RNAs. Accounts of Chemical Research, 2020, 53, 1782-1790.	7.6	21
240	Identifying Cleaved and Noncleaved Targets of Small Interfering RNAs and MicroRNAs in Mammalian Cells by SpyCLIP. Molecular Therapy - Nucleic Acids, 2020, 22, 900-909.	2.3	4

#	Article	IF	CITATIONS
241	USP10 Targeted Self-Deliverable siRNA to Prevent Scarring in the Cornea. Molecular Therapy - Nucleic Acids, 2020, 21, 1029-1043.	2.3	11
242	N-acetylgalactosamine (GalNAc)-conjugates: Delivering oligonucleotide drugs to the liver. , 2020, , 641-667.		2
243	Efficient construction of a stable linear gene based on a TNA loop modified primer pair for gene delivery. Chemical Communications, 2020, 56, 9894-9897.	2.2	9
244	Investigation of Strand-Selective Interaction of SNA-Modified siRNA with AGO2-MID. International Journal of Molecular Sciences, 2020, 21, 5218.	1.8	4
245	Targeting RNA With AntisenseÂOligonucleotides and SmallÂInterfering RNA in Dyslipidemias. Journal of the American College of Cardiology, 2020, 76, 563-579.	1.2	52
246	2′- <i>O</i> -Methylation can increase the abundance and lifetime of alternative RNA conformational states. Nucleic Acids Research, 2020, 48, 12365-12379.	6.5	59
247	Urinary Kidney Biomarker Panel Detects Preclinical Antisense Oligonucleotide-Induced Tubular Toxicity. Toxicologic Pathology, 2020, 48, 981-993.	0.9	9
248	Synthesis of siRNAs incorporated with cationic peptides R8G7 and R8A7 and the effect of the modifications on siRNA properties. RSC Advances, 2020, 10, 34815-34824.	1.7	1
249	Single-Stranded Phosphorothioated Regions Enhance Cellular Uptake of Cholesterol-Conjugated siRNA but Not Silencing Efficacy. Molecular Therapy - Nucleic Acids, 2020, 21, 991-1005.	2.3	22
250	Long Non-Coding RNAs in Liver Cancer and Nonalcoholic Steatohepatitis. Non-coding RNA, 2020, 6, 34.	1.3	11
251	DNA Analogues Modified at the Nonlinking Positions of Phosphorus. Accounts of Chemical Research, 2020, 53, 2152-2166.	7.6	17
252	Potential use of noncoding RNAs and innovative therapeutic strategies to target the 5'UTR of SARS-CoV-2. Epigenomics, 2020, 12, 1349-1361.	1.0	34
253	An Improved Process for the Manufacture of 5′- <i>O</i> -(4,4′-Dimethoxytrityl)- <i>N</i> ² -isobutyryl-2′- <i>O</i> -(2-methoxyethyl)guanos Organic Process Research and Development, 2020, 24, 2583-2590.	sines	2
254	An artificial cationic oligosaccharide combined with phosphorothioate linkages strongly improves siRNA stability. Scientific Reports, 2020, 10, 14845.	1.6	13
255	Long Non-Coding RNAs as Strategic Molecules to Augment the Radiation Therapy in Esophageal Squamous Cell Carcinoma. International Journal of Molecular Sciences, 2020, 21, 6787.	1.8	14
256	Gapmers. Methods in Molecular Biology, 2020, , .	0.4	1
257	RNA Drugs and RNA Targets for Small Molecules: Principles, Progress, and Challenges. Pharmacological Reviews, 2020, 72, 862-898.	7.1	192
258	Boosting the autophagy″ysosomal pathway by phytochemicals: A potential therapeutic strategy against Alzheimer's disease. IUBMB Life, 2020, 72, 2360-2281.	1.5	5

#	Article	IF	Citations
259	Modified nucleic acids: replication, evolution, and next-generation therapeutics. BMC Biology, 2020, 18, 112.	1.7	77
260	Intrastrand backbone-nucleobase interactions stabilize unwound right-handed helical structures of heteroduplexes of L-aTNA/RNA and SNA/RNA. Communications Chemistry, 2020, 3, .	2.0	9
261	Long non-coding RNAs in breast cancer metastasis. Non-coding RNA Research, 2020, 5, 208-218.	2.4	41
262	Active immunotherapy and alternative therapeutic modalities for Alzheimer's disease. Alzheimer's and Dementia: Translational Research and Clinical Interventions, 2020, 6, e12090.	1.8	3
263	Advances in engineering CRISPR-Cas9 as a molecular Swiss Army knife. Synthetic Biology, 2020, 5, ysaa021.	1.2	9
264	LncRNAs in Cancer: From garbage to Junk. Cancers, 2020, 12, 3220.	1.7	41
265	Post-synthetic transamination at position N4 of cytosine in oligonucleotides assembled with routinely used phosphoramidites. Organic and Biomolecular Chemistry, 2020, 18, 9632-9638.	1.5	0
266	Emerging siRNA Design Principles and Consequences for Biotransformation and Disposition in Drug Development. Journal of Medicinal Chemistry, 2020, 63, 6407-6422.	2.9	16
267	Periostin antisense oligonucleotide prevents hepatic steatosis and fibrosis in a mouse model of nonâ€alcoholic steatohepatitis. Journal of Gastroenterology and Hepatology (Australia), 2020, 35, 2140-2150.	1.4	10
268	Mutation-Directed Therapeutics for Neurofibromatosis Type I. Molecular Therapy - Nucleic Acids, 2020, 20, 739-753.	2.3	16
269	Fluorescent Peptide Dendrimers for siRNA Transfection: Tracking pH Responsive Aggregation, siRNA Binding, and Cell Penetration. Bioconjugate Chemistry, 2020, 31, 1671-1684.	1.8	11
270	Natural polyphenol assisted delivery of single-strand oligonucleotides by cationic polymers. Gene Therapy, 2020, 27, 383-391.	2.3	27
271	Technical Considerations for Use of Oligonucleotide Solution API. Nucleic Acid Therapeutics, 2020, 30, 189-197.	2.0	20
272	Refining LNA safety profile by controlling phosphorothioate stereochemistry. PLoS ONE, 2020, 15, e0232603.	1.1	9
273	Therapeutic siRNA: state of the art. Signal Transduction and Targeted Therapy, 2020, 5, 101.	7.1	674
274	Novel EGFP reporter cell and mouse models for sensitive imaging and quantification of exon skipping. Scientific Reports, 2020, 10, 10110.	1.6	3
275	Tumor Interferon Signaling Is Regulated by a IncRNA INCR1 Transcribed from the PD-L1 Locus. Molecular Cell, 2020, 78, 1207-1223.e8.	4.5	43
276	Antisense antibacterial compounds. Translational Research. 2020. 223. 89-106.	2.2	20

#	Article	IF	CITATIONS
278	Stimuli-responsive combination therapy of cisplatin and Nrf2 siRNA for improving antitumor treatment of osteosarcoma. Nano Research, 2020, 13, 630-637.	5.8	12
279	Fetal gene therapy and pharmacotherapy to treat congenital hearing loss and vestibular dysfunction. Hearing Research, 2020, 394, 107931.	0.9	16
280	Effects of Chemical Modifications on siRNA Strand Selection in Mammalian Cells. Nucleic Acid Therapeutics, 2020, 30, 229-236.	2.0	12
281	Chemically Modified Aptamers in Biological Analysis. ACS Applied Bio Materials, 2020, 3, 2816-2826.	2.3	9
282	Transcription and Translation Inhibitors in Cancer Treatment. Frontiers in Chemistry, 2020, 8, 276.	1.8	54
283	Chemical Synthesis and Biological Application of Modified Oligonucleotides. Bioconjugate Chemistry, 2020, 31, 1213-1233.	1.8	50
284	Delivery of genome editing tools: A promising strategy for HPV-related cervical malignancy therapy. Expert Opinion on Drug Delivery, 2020, 17, 753-766.	2.4	22
285	Mechanochemical Synthesis of Short DNA Fragments. Chemistry - A European Journal, 2020, 26, 8857-8861.	1.7	16
286	Antisense Oligonucleotides: An Emerging Area in Drug Discovery and Development. Journal of Clinical Medicine, 2020, 9, 2004.	1.0	239
287	Phos-tag-based micropipette-tip method for analysis of phosphomonoester-type impurities in synthetic oligonucleotides. Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences, 2020, 1151, 122198.	1.2	1
288	A critical analysis of methods used to investigate the cellular uptake and subcellular localization of RNA therapeutics. Nucleic Acids Research, 2020, 48, 7623-7639.	6.5	40
289	Hydrophobic Interaction: A Promising Driving Force for the Biomedical Applications of Nucleic Acids. Advanced Science, 2020, 7, 2001048.	5.6	70
290	2′-O-Methyl at 20-mer Guide Strand 3′ Termini May Negatively Affect Target Silencing Activity of Fully Chemically Modified siRNA. Molecular Therapy - Nucleic Acids, 2020, 21, 266-277.	2.3	10
291	Delivery of Oligonucleotides to the Liver with GalNAc: From Research to Registered Therapeutic Drug. Molecular Therapy, 2020, 28, 1759-1771.	3.7	177
292	Green nanoparticles for oligonucleotide delivery. Gene Therapy, 2020, 27, 535-536.	2.3	3
293	Phosphorothioate Modification of mRNA Accelerates the Rate of Translation Initiation to Provide More Efficient Protein Synthesis. Angewandte Chemie - International Edition, 2020, 59, 17403-17407.	7.2	32
294	Phosphorothioate Modification of mRNA Accelerates the Rate of Translation Initiation to Provide More Efficient Protein Synthesis. Angewandte Chemie, 2020, 132, 17556-17560.	1.6	4
295	l-DNA-Based Catalytic Hairpin Assembly Circuit. Molecules, 2020, 25, 947.	1.7	15

#	Article	IF	CITATIONS
296	L-Type Calcium Channel Blocker Enhances Cellular Delivery and Gene Silencing Potency of Cell-Penetrating Asymmetric siRNAs. Molecular Pharmaceutics, 2020, 17, 777-786.	2.3	4
297	Novel approaches for efficient in vivo fermentation production of noncoding RNAs. Applied Microbiology and Biotechnology, 2020, 104, 1927-1937.	1.7	24
298	Effect of oligonucleotide structural difference on matrixâ€assisted laser desorption/ionization inâ€source decay in comparison with collisionâ€induced dissociation fragmentation. Rapid Communications in Mass Spectrometry, 2020, 34, e8819.	0.7	0
299	RNA-Targeted Therapies and High-Throughput Screening Methods. International Journal of Molecular Sciences, 2020, 21, 2996.	1.8	24
300	The powerful world of antisense oligonucleotides: From bench to bedside. Wiley Interdisciplinary Reviews RNA, 2020, 11, e1594.	3.2	162
301	Oligonucleotides: Current Trends and Innovative Applications in the Synthesis, Characterization, and Purification. Biotechnology Journal, 2020, 15, e1900226.	1.8	32
302	Gene delivery using cell penetrating peptides-zeolitic imidazolate frameworks. Microporous and Mesoporous Materials, 2020, 300, 110173.	2.2	85
303	Multispecific drugs herald a new era of biopharmaceutical innovation. Nature, 2020, 580, 329-338.	13.7	166
304	Consecutive 5′- and 3′-amide linkages stabilise antisense oligonucleotides and elicit an efficient RNase H response. Chemical Communications, 2020, 56, 5496-5499.	2.2	11
305	The Promise and Challenges of Developing miRNA-Based Therapeutics for Parkinson's Disease. Cells, 2020, 9, 841.	1.8	51
306	AntimiR-21 Prevents Myocardial Dysfunction in a Pig Model of Ischemia/Reperfusion Injury. Journal of the American College of Cardiology, 2020, 75, 1788-1800.	1.2	82
307	Pharmacodynamic and Pharmacokinetic Properties of Full Phosphorothioate Small Interfering RNAs for Gene Silencing <i>In Vivo</i> . Nucleic Acid Therapeutics, 2021, 31, 237-244.	2.0	10
308	Long non-coding RNAs in antiviral immunity. Seminars in Cell and Developmental Biology, 2021, 111, 126-134.	2.3	21
309	Antisense Oligonucleotides as Potential Therapeutics for Type 2 Diabetes. Nucleic Acid Therapeutics, 2021, 31, 39-57.	2.0	15
310	Long non-coding RNAs: From disease code to drug role. Acta Pharmaceutica Sinica B, 2021, 11, 340-354.	5.7	246
311	DUX4 Transcript Knockdown with Antisense 2′-O-Methoxyethyl Gapmers for the Treatment of Facioscapulohumeral Muscular Dystrophy. Molecular Therapy, 2021, 29, 848-858.	3.7	24
312	Sustainability Challenges and Opportunities in Oligonucleotide Manufacturing. Journal of Organic Chemistry, 2021, 86, 49-61.	1.7	39
313	Nucleic Acid-Based Technologies Targeting Coronaviruses. Trends in Biochemical Sciences, 2021, 46, 351-365.	3.7	35

#	Article	IF	CITATIONS
314	(S)-5′-C-Aminopropyl-2′-O-methyl nucleosides enhance antisense activity in cultured cells and binding affinity to complementary single-stranded RNA. Bioorganic and Medicinal Chemistry, 2021, 30, 115925.	1.4	5
315	Targeting STAT3 with Proteolysis Targeting Chimeras and Next-Generation Antisense Oligonucleotides. Molecular Cancer Therapeutics, 2021, 20, 219-228.	1.9	10
316	Designer DNA nanostructures for therapeutics. CheM, 2021, 7, 1156-1179.	5.8	91
317	Long non-coding RNAs as the regulators and targets of macrophage M2 polarization. Life Sciences, 2021, 266, 118895.	2.0	10
318	Chemo-enzymatic access to C-4′-hydroxyl-tetrahydrofurano-spironucleosides. New Journal of Chemistry, 2021, 45, 1609-1616.	1.4	2
319	RNA Modifications in the Central Nervous System. , 0, , 153-192.		1
320	Epigenetic Modification 6â€Methyladenosine Can Impact the Potency and Specificity of siRNA. ChemBioChem, 2021, 22, 491-495.	1.3	5
321	THERAPEUTIC OLIGONUCLEOTIDES, IMPURITIES, DEGRADANTS, AND THEIR CHARACTERIZATION BY MASS SPECTROMETRY. Mass Spectrometry Reviews, 2021, 40, 75-109.	2.8	35
322	Endothelial-Derived miR-17â^1⁄492 Promotes Angiogenesis to Protect against Renal Ischemia-Reperfusion Injury. Journal of the American Society of Nephrology: JASN, 2021, 32, 553-562.	3.0	20
323	<i>In vivo</i> fermentation production of humanized noncoding RNAs carrying payload miRNAs for targeted anticancer therapy. Theranostics, 2021, 11, 4858-4871.	4.6	16
324	Therapeutic Mechanism of Nucleic Acid Drugs. ChemistrySelect, 2021, 6, 903-916.	0.7	8
325	Therapeutic strategies for modulating epigenetic mechanisms in cardiovascular disease. , 2021, , 349-373.		0
326	Recent progress in non-native nucleic acid modifications. Chemical Society Reviews, 2021, 50, 5126-5164.	18.7	155
327	Transliteration of synthetic genetic enzymes. Nucleic Acids Research, 2021, 49, 11438-11446.	6.5	12
328	Understanding In Vivo Fate of Nucleic Acid and Gene Medicines for the Rational Design of Drugs. Pharmaceutics, 2021, 13, 159.	2.0	10
329	Phosphorothioate Substitutions in RNA Structure Studied by Molecular Dynamics Simulations, QM/MM Calculations, and NMR Experiments. Journal of Physical Chemistry B, 2021, 125, 825-840.	1.2	11
330	A modular approach to enzymatic ligation of peptides and proteins with oligonucleotides. Chemical Communications, 2021, 57, 5507-5510.	2.2	2
331	Synthesis of a novel cyclopropyl phosphonate nucleotide as a phosphate mimic. Chemical Communications, 2021, 57, 6808-6811.	2.2	3

#	Article	IF	CITATIONS
332	Synthesis and Structure of 4'-CF3-Uridine Modified Oligoribonucleotides. Chinese Journal of Organic Chemistry, 2021, 41, 4059.	0.6	0
333	siRNA Design and GalNAc-Empowered Hepatic Targeted Delivery. Methods in Molecular Biology, 2021, 2282, 77-100.	0.4	6
334	Disulfide Bridging Strategies in Viral and Nonviral Platforms for Nucleic Acid Delivery. Biochemistry, 2021, 60, 966-990.	1.2	18
335	Antisense Oligonucleotide Therapy for Neurodevelopmental Disorders. Developmental Neuroscience, 2021, 43, 247-252.	1.0	34
336	Silencing of Oncogenic KRAS by Mutant-Selective Small Interfering RNA. ACS Pharmacology and Translational Science, 2021, 4, 703-712.	2.5	7
337	Redesigning the Genetic Polymers of Life. Accounts of Chemical Research, 2021, 54, 1056-1065.	7.6	36
339	Trace-Level Determination of Acrylonitrile Generated in the Manufacturing Process of Oligonucleotides by Static Headspace Gas Chromatography with an Electron Impact(+) Mass Detector. Organic Process Research and Development, 2021, 25, 318-326.	1.3	4
341	Structural tuning of oligonucleotides for enhanced blood circulation properties of unit polyion complexes prepared from two-branched poly(ethylene glycol)-block-poly(l-lysine). Journal of Controlled Release, 2021, 330, 812-820.	4.8	15
343	Synthesis and properties of oligonucleotides bearing thymidine derivatives with 1,6-dioxaspiro[4.5]decane skeleton. Bioorganic and Medicinal Chemistry, 2021, 31, 115966.	1.4	3
344	Kidney Allograft Fibrosis: Diagnostic and Therapeutic Strategies. Transplantation, 2021, 105, e114-e130.	0.5	13
345	Design of polymers for siRNA delivery: Recent progress and challenges. View, 2021, 2, 20200026.	2.7	29
346	Stable Hairpin Structures Formed by Xyloseâ€Based Nucleic Acids. ChemBioChem, 2021, 22, 1638-1645.	1.3	4
347	DNA Nanostructures: Current Challenges and Opportunities for Cellular Delivery. ACS Nano, 2021, 15, 3631-3645.	7.3	92
348	Combination of Coordination and Releasable Covalent Binding for the Delivery of Antisense Therapeutics by Bisphosphonate-Hyaluronan-Oligonucleotide Conjugates. ACS Applied Polymer Materials, 2021, 3, 2197-2210.	2.0	1
349	A critical approach for successful use of circulating microRNAs as biomarkers in cardiovascular diseases: the case of hypertrophic cardiomyopathy. Heart Failure Reviews, 2022, 27, 281-294.	1.7	9
350	A biologically stable DNAzyme that efficiently silences gene expression in cells. Nature Chemistry, 2021, 13, 319-326.	6.6	121
351	Recent Advances in Oligonucleotide Therapeutics in Oncology. International Journal of Molecular Sciences, 2021, 22, 3295.	1.8	96
352	RNA-based therapies: A cog in the wheel of lung cancer defense. Molecular Cancer, 2021, 20, 54.	7.9	53

ARTICLE IF CITATIONS # Development and Modification of Pre-miRNAs with a FRET Dye Pair for the Intracellular Visualization 353 2.1 2 of Processing Intermediates That Are Generated in Cells. Sensors, 2021, 21, 1785. Chargeâ€Conversion Strategies for Nucleic Acid Delivery. Advanced Functional Materials, 2021, 31, 354 2011103. DYRK1A Inhibitors as Potential Therapeutics for Î²-Cell Regeneration for Diabetes. Journal of Medicinal 355 2.9 38 Chemistry, 2021, 64, 2901-2922. In vivo uptake of antisense oligonucleotide drugs predicted by ab initio quantum mechanical 356 calculations. Scientific Reports, 2021, 11, 6321. Emerging role of RNA interference in immune cells engineering and its therapeutic synergism in 357 2.7 12 immunotherapy. British Journal of Pharmacology, 2021, 178, 1741-1755. miRNAs as Therapeutic Tools and Biomarkers for Prostate Cancer. Pharmaceutics, 2021, 13, 380. 359 RNA therapeutics for cardiovascular disease. Current Opinion in Cardiology, 2021, 36, 256-263. 0.8 11 Lipid-Based Nanoparticles in the Clinic and Clinical Trials: From Cancer Nanomedicine to COVID-19 2.1 222 Vaccines. Vaccines, 2021, 9, 359. 362 The Challenges and Strategies of Antisense Oligonucleotide Drug Delivery. Biomedicines, 2021, 9, 433. 1.4 79 The evolution of commercial drug delivery technologies. Nature Biomedical Engineering, 2021, 5, 11.6 951-967. The NIH Somatic Cell Genome Editing program. Nature, 2021, 592, 195-204. 364 13.7 84 LncRNAs as Therapeutic Targets for Autophagy-involved Cardiovascular Diseases: A Review of 1.2 Molecular Mechanism and Therapy Strategy. Current Medicinal Chemistry, 2021, 28, 1796-1814. Distribution and biotransformation of therapeutic antisense oligonucleotides and conjugates. Drug 366 3.2 17 Discovery Today, 2021, 26, 2244-2258. Toward an Understanding of Extracellular tRNA Biology. Frontiers in Molecular Biosciences, 2021, 8, 367 1.6 662620. Long non-coding RNAs in recurrent ovarian cancer: Theranostic perspectives. Cancer Letters, 2021, 368 3.2 14 502, 97-107. Efficient and Accurate Potential Energy Surfaces of Puckering in Sugar-Modified Nucleosides. Journal of Chemical Theory and Computation, 2021, 17, 3814-3823. Smart Nucleic Acids as Future Therapeutics. Trends in Biotechnology, 2021, 39, 1289-1307. 370 4.9 15 DNAâ€Scaffolded Disulfide Redox Network for Programming Drugâ€Delivery Kinetics. Chemistry - A 371 European Journal, 2021, 27, 8745-8752.

#	Article	IF	CITATIONS
372	Novel Soluble Mediators of Innate Immune System Activation in Solid Allograft Rejection. Transplantation, 2022, 106, 500-509.	0.5	7
373	Thermostability, Tunability, and Tenacity of RNA as Rubbery Anionic Polymeric Materials in Nanotechnology and Nanomedicine—Specific Cancer Targeting with Undetectable Toxicity. Chemical Reviews, 2021, 121, 7398-7467.	23.0	45
374	An oral antisense oligonucleotide for PCSK9 inhibition. Science Translational Medicine, 2021, 13, .	5.8	74
375	Neurodegenerative diseases: a hotbed for splicing defects and the potential therapies. Translational Neurodegeneration, 2021, 10, 16.	3.6	39
376	The current landscape of nucleic acid therapeutics. Nature Nanotechnology, 2021, 16, 630-643.	15.6	578
377	34S-SIL of PCSK9-Active Oligonucleotide as Tools for Accurate Quantification by Mass Spectrometry. Nucleic Acid Therapeutics, 2021, 31, 375-381.	2.0	0
378	Fluorescent base analogues in gapmers enable stealth labeling of antisense oligonucleotide therapeutics. Scientific Reports, 2021, 11, 11365.	1.6	5
379	Chromatin state dynamics confers specific therapeutic strategies in enhancer subtypes of colorectal cancer. Gut, 2022, 71, 938-949.	6.1	25
380	From Antisense RNA to RNA Modification: Therapeutic Potential of RNA-Based Technologies. Biomedicines, 2021, 9, 550.	1.4	40
381	Design and Hybridization Properties of Acyclic Xeno Nucleic Acid Oligomers. ChemBioChem, 2021, 22, 2507-2515.	1.3	18
382	Critical contribution of macrophage scavenger receptor 1 to the uptake of nanostructured DNA by immune cells. Nanomedicine: Nanotechnology, Biology, and Medicine, 2021, 34, 102386.	1.7	7
383	Engineering Gene Therapy: Advances and Barriers. Advanced Therapeutics, 2021, 4, 2100040.	1.6	23
384	LncRNAs associated with glioblastoma: From transcriptional noise to novel regulators with a promising role in therapeutics. Molecular Therapy - Nucleic Acids, 2021, 24, 728-742.	2.3	45
386	A Combinatorial Approach Based on Nucleic Acid Assembly and Electrostatic Compression for siRNA Delivery. Chemical Research in Chinese Universities, 2021, 37, 906-913.	1.3	1
387	Nonspecific Binding—Fundamental Concepts and Consequences for Biosensing Applications. Chemical Reviews, 2021, 121, 8095-8160.	23.0	113
388	A GATA3 Targeting Nucleic Acid Nanocapsule for In Vivo Gene Regulation in Asthma. ACS Nano, 2021, 15, 11192-11201.	7.3	8
389	Mesyl Phosphoramidate Oligonucleotides as Potential Splice-Switching Agents: Impact of Backbone Structure on Activity and Intracellular Localization. Nucleic Acid Therapeutics, 2021, 31, 190-200.	2.0	18
390	Safety, Tissue Distribution, and Metabolism of LNA-Containing Antisense Oligonucleotides in Rats. Toxicologic Pathology, 2021, 49, 1174-1192.	0.9	7

#	Article	IF	CITATIONS
391	Noncoding RNA therapeutics — challenges and potential solutions. Nature Reviews Drug Discovery, 2021, 20, 629-651.	21.5	749
392	An Investigation into the Potential of Targeting Escherichia coli rne mRNA with Locked Nucleic Acid (LNA) Gapmers as an Antibacterial Strategy. Molecules, 2021, 26, 3414.	1.7	0
393	Nucleic acid nanoparticles (NANPs) as molecular tools to direct desirable and avoid undesirable immunological effects. Advanced Drug Delivery Reviews, 2021, 173, 427-438.	6.6	38
394	Artificial nucleic acid backbones and their applications in therapeutics, synthetic biology and biotechnology. Emerging Topics in Life Sciences, 2021, 5, 691-697.	1.1	5
395	Identification and Optimization of a Minor Allele-Specific siRNA to Prevent PNPLA3 I148M-Driven Nonalcoholic Fatty Liver Disease. Nucleic Acid Therapeutics, 2021, 31, 324-340.	2.0	9
396	Ligand-mediated delivery of RNAi-based therapeutics for the treatment of oncological diseases. NAR Cancer, 2021, 3, zcab030.	1.6	16
398	Fully automated fast-flow synthesis of antisense phosphorodiamidate morpholino oligomers. Nature Communications, 2021, 12, 4396.	5.8	24
399	Integration of chemically modified nucleotides with <scp>DNA</scp> strand displacement reactions for applications in living systems. Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology, 2022, 14, e1743.	3.3	7
401	Single bioengineered ncRNA molecule for dual-targeting toward the control of non-small cell lung cancer patient-derived xenograft tumor growth. Biochemical Pharmacology, 2021, 189, 114392.	2.0	12
402	Avoiding Highâ€Pressure Problem for Modified RNA â€attached Polystyrene Support by Preâ€6welling Using Toluene in the Oligonucleotide Synthesis. Bulletin of the Korean Chemical Society, 2021, 42, 1296.	1.0	2
403	Overcoming the challenges of tissue delivery for oligonucleotide therapeutics. Trends in Pharmacological Sciences, 2021, 42, 588-604.	4.0	47
404	Reprogramming Gene Expression by Targeting RNA-Based Interactions: A Novel Pipeline Utilizing RNA Array Technology. ACS Synthetic Biology, 2021, 10, 1847-1858.	1.9	5
405	Nonviral siRNA delivery systems for pancreatic cancer therapy. Biotechnology and Bioengineering, 2021, 118, 3669-3690.	1.7	13
406	Bicyclo[2.2.2]octane-2,3-diol as an universal linker for the solid-phase synthesis of oligonucleotides. Tetrahedron, 2021, 92, 132261.	1.0	3
407	Small nucleic acids and the path to the clinic for anti-CRISPR. Biochemical Pharmacology, 2021, 189, 114492.	2.0	7
408	Synthesis and Characterization of Optically Pure Gamma―PNA Backbones by SIBX â€Mediated Reductive Amination. Bulletin of the Korean Chemical Society, 2021, 42, 1304.	1.0	2
409	Multiple antisense oligonucleotides targeted against monoacylglycerol acyltransferase 1 (Mogat1) improve glucose metabolism independently of Mogat1. Molecular Metabolism, 2021, 49, 101204.	3.0	8
410	Therapeutics Development for Alagille Syndrome. Frontiers in Pharmacology, 2021, 12, 704586.	1.6	7

#	Article	IF	CITATIONS
411	Deliver the promise: RNAs as a new class of molecular entities for therapy and vaccination. , 2022, 230, 107967.		40
412	Programmed Instability of Ligand Conjugation Manifold for Efficient Hepatocyte Delivery of Therapeutic Oligonucleotides. Nucleic Acid Therapeutics, 2021, 31, 404-416.	2.0	4
413	siRNA: Mechanism of action, challenges, and therapeutic approaches. European Journal of Pharmacology, 2021, 905, 174178.	1.7	143
414	Supramolecular "Click Chemistry―for Targeting in the Body. Bioconjugate Chemistry, 2021, 32, 1935-1946.	1.8	20
415	Access to 1′-Amino Carbocyclic Phosphoramidite to Enable Postsynthetic Functionalization of Oligonucleotides. Organic Letters, 2021, 23, 6735-6739.	2.4	2
416	Transcriptome-Wide Off-Target Effects of Steric-Blocking Oligonucleotides. Nucleic Acid Therapeutics, 2021, 31, 392-403.	2.0	42
418	Analytical techniques currently used in the pharmaceutical industry for the quality control of RNA-based therapeutics and ongoing developments. Journal of Chromatography A, 2021, 1651, 462283.	1.8	12
419	Recent Advances in the Delivery Carriers and Chemical Conjugation Strategies for Nucleic Acid Drugs. Cancers, 2021, 13, 3881.	1.7	10
420	Minimal Physiologically Based Pharmacokinetic-Pharmacodynamic (mPBPK-PD) Model of <i>N</i> -Acetylgalactosamine–Conjugated Small Interfering RNA Disposition and Gene Silencing in Preclinical Species and Humans. Journal of Pharmacology and Experimental Therapeutics, 2021, 379, 134-146.	1.3	19
421	The infinite possibilities of RNA therapeutics. Journal of Industrial Microbiology and Biotechnology, 2021, 48, .	1.4	15
422	Recent developments in the characterization of nucleic acid hybridization kinetics. Current Opinion in Biomedical Engineering, 2021, 19, 100305.	1.8	2
423	Role of mammalian long non-coding RNAs in normal and neuro oncological disorders. Genomics, 2021, 113, 3250-3273.	1.3	5
424	Synthesis of Oligoribonucleotides Containing a 2′-Amino-5′- <i>S</i> -phosphorothiolate Linkage. Journal of Organic Chemistry, 2021, 86, 13231-13244.	1.7	2
425	Antisense oligonucleotide-based drug development for Cystic Fibrosis patients carrying the 3849+10Âkb C-to-T splicing mutation. Journal of Cystic Fibrosis, 2021, 20, 865-875.	0.3	30
426	Delivery of Oligonucleotide Therapeutics: Chemical Modifications, Lipid Nanoparticles, and Extracellular Vesicles. ACS Nano, 2021, 15, 13993-14021.	7.3	74
427	Metastasis associated long noncoding RNAs in glioblastoma: Biomarkers and therapeutic targets. Journal of Cellular Physiology, 2022, 237, 401-420.	2.0	10
428	mRNA delivery via non-viral carriers for biomedical applications. International Journal of Pharmaceutics, 2021, 607, 121020.	2.6	17
429	A P(V) platform for oligonucleotide synthesis. Science, 2021, 373, 1265-1270.	6.0	38

#	Article	IF	CITATIONS
430	Synthesis and duplex-forming ability of oligonucleotides modified with 4′-C,5′-C-methylene-bridged nucleic acid (4′,5′-BNA). Bioorganic and Medicinal Chemistry, 2021, 46, 116359.	1.4	2
431	Synthesis and Properties of Oligonucleotides Containing 2′â€ <i>O</i> ,4′â€ <i>C</i> â€Ethyleneâ€Bridged 5â€Methyluridine with Exocyclic Methylene and Methyl Groups in the Bridge. European Journal of Organic Chemistry, 2021, 2021, 4993-5002.	1.2	3
432	Structural insight into locked nucleic acid based novel antisense modifications: A DFT calculations at monomer and MD simulations at oligomer level. Journal of Molecular Graphics and Modelling, 2021, 107, 107945.	1.3	3
433	Therapeutic Potential of Chemically Modified, Synthetic, Triplex Peptide Nucleic Acid–Based Oncomir Inhibitors for Cancer Therapy. Cancer Research, 2021, 81, 5613-5624.	0.4	14
434	Small circular interfering RNAs (sciRNAs) as a potent therapeutic platform for gene-silencing. Nucleic Acids Research, 2021, 49, 10250-10264.	6.5	7
435	An analytical study of lipid-oligonucleotide aggregation properties. Journal of Pharmaceutical and Biomedical Analysis, 2021, 205, 114327.	1.4	1
436	Recent advances in therapeutic nucleic acids and their analytical methods. Journal of Pharmaceutical and Biomedical Analysis, 2021, 206, 114368.	1.4	22
437	Chemical strategies for strand selection in short-interfering RNAs. RSC Advances, 2021, 11, 2415-2426.	1.7	11
438	Zn ²⁺ -Dependent peptide nucleic acid-based artificial ribonucleases with unprecedented efficiency and specificity. Chemical Communications, 2021, 57, 10911-10914.	2.2	7
439	Expression and Purification of tRNA/pre-miRNA-Based Recombinant Noncoding RNAs. Methods in Molecular Biology, 2021, 2323, 249-265.	0.4	4
440	Oligonucleotide Complexes in Bioorganometallic Chemistry. , 2022, , 146-182.		1
441	Synthesis, Structural, and Conformational Analysis of 4′â€ <i>C</i> â€Alkylâ€2′â€ <i>O</i> â€Ethylâ€Uridine Nucleosides. European Journal of Organic Chemistry, 2021, 2021, 924-932.	Modified	6
442	Incorporation of Pseudoâ€complementary Bases 2,6â€Diaminopurine and 2â€Thiouracil into Serinol Nucleic Acid (SNA) to Promote SNA/RNA Hybridization. Chemistry - an Asian Journal, 2020, 15, 1266-1271.	1.7	10
443	Chemical Modifications in RNA Interference and CRISPR/Cas Genome Editing Reagents. Methods in Molecular Biology, 2020, 2115, 23-55.	0.4	7
444	Invention and Early History of Gapmers. Methods in Molecular Biology, 2020, 2176, 3-19.	0.4	13
445	Tips for Successful IncRNA Knockdown Using Gapmers. Methods in Molecular Biology, 2020, 2176, 121-140.	0.4	8
446	Long noncoding RNAs in nonalcoholic fatty liver disease and liver fibrosis: state-of-the-art and perspectives in diagnosis and treatment. Drug Discovery Today, 2020, 25, 1277-1286.	3.2	15
447	RNA-targeting CRISPR systems from metagenomic discovery to transcriptomic engineering. Nature Cell Biology, 2020, 22, 143-150.	4.6	48

ARTICLE IF CITATIONS # Large-scale Automated Synthesis of Therapeutic Oligonucleotides: A Status Update. RSC Drug 448 0.2 6 Discovery Series, 2019, , 453-473. Preclinical and Clinical Drug-metabolism, Pharmacokinetics and Safety of Therapeutic 0.2 Oligonucleotides. RSC Drug Discovery Series, 2019, , 474-531. 450 Heterochiral nucleic acid circuits. Emerging Topics in Life Sciences, 2019, 3, 501-506. 1.1 3 Targeting castration-resistant prostate cancer with androgen receptor antisense oligonucleotide therapy. JCI Insight, 2019, 4, . MiRâ \in 29 coordinates ageâ \in dependent plasticity brakes in the adult visual cortex. EMBO Reports, 2020, 21, 456 2.0 15 e50431. The RNA-binding profile of the splicing factor SRSF6 in immortalized human pancreatic \hat{l}^2 -cells. Life Science Alliance, 2021, 4, e202000825. 1.3 Y-Shaped Circular Aptamer–DNAzyme Conjugates for Highly Efficient in Vivo Gene Silencing. CCS 458 4.6 17 Chemistry, 2020, 2, 631-641. Convertible and Constrained Nucleotides: The 2'-Deoxyribose 5'-C-Functionalization Approach, a 1.7 French Touch. Molecules, 2021, 26, 5925. Polyglutamine Ataxias: Our Current Molecular Understanding and What the Future Holds for 460 1.4 5 Antisense Therapies. Biomedicines, 2021, 9, 1499. Antisense locked nucleic acid gapmers to control Candida albicans filamentation. Nanomedicine: 1.7 Nanotechnology, Biology, and Medicine, 2022, 39, 102469. N-Acetyl Galactosamine Targeting: Paving the Way for Clinical Application of Nucleotide Medicines in 462 1.1 13 Cardiovascular Diseases. Arteriosclerosis, Thrombósis, and Vascular Biology, 2021, 41, 2855-2865. Characterization of <i>Escherichia coli</i> RNase H Discrimination of DNA Phosphorothioate 2.0 Stereoisomers. Nucleic Acid Therapeutics, 2021, 31, 383-391. Selective targeting of MYC mRNA by stabilized antisense oligonucleotides. Oncogene, 2021, 40, 464 2.6 5 6527-6539. Self-Healing Hydrogels as Biomedical Scaffolds for Cell, Gene and Drug Delivery. Research & Reviews Journal of Material Sciences, 2017, 05, . 0.1 Synthesis and Properties of Oligonucleotides Containing 3â€²-O,4â€²-C-Ethyleneoxy-Bridged 466 2 0.4 5-Methyluridines. Heterocycles, 2018, 97, 306. Conjugate-mediated Delivery of RNAi-based Therapeutics: Enhancing Pharmacokinetics–Pharmacodynamics Relationships of Medicinal Oligonucleotides. RSC Drug Discovery Series, 2019, , 206-232. Advances and Challenges of RNAi-Based Anti-HIV Therapeutics. RSC Drug Discovery Series, 2019, , 469 0.2 0 266-291. Derivative Synthesis toward Enhancement of the Biophysical Properties of 2â€2,4â€2-Bridged Nucleic Acids. 470 Yuki Gosei Kagaku Kyokaishi/Journal of Synthetic Organic Chemistry, 2019, 77, 994-1004.

#	Article	IF	CITATIONS
471	Synthesis and Hybridizing Property of Oligonucleotides Including 2′-C,4′-C-Ethyleneoxy-Bridged 2′-Deoxyadenosine with an Exocyclic Methylene Unit. Heterocycles, 2020, 101, 284.	0.4	3
472	Development of Highly Efficient Divergent Synthesis for 2'- <i>O</i> ,4'- <i>C</i> Ethylene-bridged Nucleic Acid (ENA) Phosphoramidites. Yuki Gosei Kagaku Kyokaishi/Journal of Synthetic Organic Chemistry, 2020, 78, 435-445.	0.0	1
475	Synthetic molecule libraries for nucleic acid delivery: Design parameters in cationic/ionizable lipids and polymers. Drug Metabolism and Pharmacokinetics, 2022, 42, 100428.	1.1	8
476	Site-directed mutation of purine nucleoside phosphorylase for synthesis of 2'-deoxy-2'-fluoroadenosine. Process Biochemistry, 2021, 111, 160-160.	1.8	0
477	Small Molecule Control of Morpholino Antisense Oligonucleotide Function through Staudinger Reduction. Journal of the American Chemical Society, 2021, 143, 18665-18671.	6.6	23
478	Conditional Antisense Oligonucleotides Triggered by miRNA. ACS Chemical Biology, 2021, 16, 2255-2267.	1.6	8
479	Chapter 14. Classes, Modes of Action and Selection of New Modalities in Drug Discovery. RSC Drug Discovery Series, 2020, , 277-316.	0.2	0
480	Tumorigenesis-Related Long Noncoding RNAs and Their Targeting as Therapeutic Approach in Cancer. RNA Technologies, 2020, , 277-303.	0.2	0
481	Translational control of gene function through optically regulated nucleic acids. Chemical Society Reviews, 2021, 50, 13253-13267.	18.7	18
483	4′-C-Aminoethoxy modification enhanced nuclease resistance of RNAs and improved thermal stability of RNA duplexes. Results in Chemistry, 2021, 3, 100231.	0.9	2
486	Mechanistic analysis of the enhanced RNAi activity by 6-mCEPh-purine at the 5′ end of the siRNA guide strand. Rna, 2021, 27, 151-162.	1.6	6
487	The importance of biological macromolecules in biomedicine. , 2022, , 53-68.		2
488	Novel hydrophilic-phase extraction, HILIC and high-resolution MS quantification of an RNA oligonucleotide in plasma. Bioanalysis, 2022, 14, 47-62.	0.6	6
489	Pre-Clinical and Clinical Applications of Small Interfering RNAs (siRNA) and Co-Delivery Systems for Pancreatic Cancer Therapy. Cells, 2021, 10, 3348.	1.8	30
490	Development of Kilogram-Scale Convergent Liquid-Phase Synthesis of Oligonucleotides. Journal of Organic Chemistry, 2022, 87, 2087-2110.	1.7	18
491	Gene editing with CRISPR-Cas12a guides possessing ribose-modified pseudoknot handles. Nature Communications, 2021, 12, 6591.	5.8	11
492	An RNAi therapeutic targeting hepatic DGAT2 in a genetically obese mouse model of nonalcoholic steatohepatitis. Molecular Therapy, 2022, 30, 1329-1342.	3.7	18
493	Structurally constrained phosphonate internucleotide linkage impacts oligonucleotide-enzyme interaction, and modulates siRNA activity and allele specificity. Nucleic Acids Research, 2021, 49, 12069-12088	6.5	8

#	Article	IF	CITATIONS
494	Modulating intracellular pathways to improve non-viral delivery of RNA therapeutics. Advanced Drug Delivery Reviews, 2022, 181, 114041.	6.6	26
495	Making Sense of Antisense Oligonucleotide Therapeutics Targeting Bcl-2. Pharmaceutics, 2022, 14, 97.	2.0	10
496	Microneedle systems for delivering nucleic acid drugs. Journal of Pharmaceutical Investigation, 2022, 52, 273-292.	2.7	10
498	Anti-EFG1 2′-OMethylRNA oligomer inhibits Candida albicans filamentation and attenuates the candidiasis in Galleria mellonella. Molecular Therapy - Nucleic Acids, 2022, 27, 517-523.	2.3	11
499	Glioma-targeted delivery of exosome-encapsulated antisense oligonucleotides using neural stem cells. Molecular Therapy - Nucleic Acids, 2022, 27, 611-620.	2.3	33
500	Allele-Selective LNA Gapmers for the Treatment of Fibrodysplasia Ossificans Progressiva Knock Down the Pathogenic ACVR1 ^{R206H} Transcript and Inhibit Osteogenic Differentiation. Nucleic Acid Therapeutics, 2022, 32, 185-193.	2.0	5
501	Antisense oligonucleotide technology as a research tool in plant biology. Functional Plant Biology, 2021, 49, 1-12.	1.1	4
502	Small Drugs, Huge Impact: The Extraordinary Impact of Antisense Oligonucleotides in Research and Drug Development. Molecules, 2022, 27, 536.	1.7	39
503	MicroRNA-mediated control of myocardial infarction in diabetes. Trends in Cardiovascular Medicine, 2023, 33, 195-201.	2.3	7
504	Antisense Oligonucleotide: A Potential Therapeutic Intervention for Chronic Kidney Disease. Kidney and Dialysis, 2022, 2, 16-37.	0.5	1
505	Quantitative Measurement of Cytosolic and Nuclear Penetration of Oligonucleotide Therapeutics. ACS Chemical Biology, 2022, 17, 348-360.	1.6	16
506	Genome-wide detection of CRISPR editing in vivo using GUIDE-tag. Nature Communications, 2022, 13, 437.	5.8	20
507	Gene Regulation Using Nanodiscs Modified with HIF-1-α Antisense Oligonucleotides. Bioconjugate Chemistry, 2022, 33, 279-293.	1.8	4
508	Quantification of Antisense Oligonucleotides by Splint Ligation and Quantitative Polymerase Chain Reaction. Nucleic Acid Therapeutics, 2022, 32, 66-73.	2.0	13
509	Towards SINEUP-based therapeutics: Design of an inÂvitro synthesized SINEUP RNA. Molecular Therapy - Nucleic Acids, 2022, 27, 1092-1102.	2.3	4
510	Delivery of Oligonucleotides: Efficiency with Lipid Conjugation and Clinical Outcome. Pharmaceutics, 2022, 14, 342.	2.0	17
511	Impact of guanidine-containing backbone linkages on stereopure antisense oligonucleotides in the CNS. Nucleic Acids Research, 2022, 50, 5401-5423.	6.5	22
512	Engineering miRNA features into siRNAs: Guide-strand bulges are compatible with gene repression. Molecular Therapy - Nucleic Acids, 2022, 27, 1116-1126.	2.3	1

#	Article	IF	CITATIONS
513	Nucleic Acids and Their Analogues for Biomedical Applications. Biosensors, 2022, 12, 93.	2.3	26
514	Antisense oligonucleotides: recent progress in the treatment of various diseases. Beni-Suef University Journal of Basic and Applied Sciences, 2022, 11, .	0.8	2
515	Suppression of mutant C9orf72 expression by a potent mixed backbone antisense oligonucleotide. Nature Medicine, 2022, 28, 117-124.	15.2	72
516	Methyl group configuration on acyclic threoninol nucleic acids (<i>a</i> TNAs) impacts supramolecular properties. Organic and Biomolecular Chemistry, 2022, 20, 4115-4122.	1.5	3
517	Preclinical Safety Assessment of Therapeutic Oligonucleotides. Methods in Molecular Biology, 2022, 2434, 355-370.	0.4	6
518	NanoSIMS Imaging Reveals the Impact of Ligand-ASO Conjugate Stability on ASO Subcellular Distribution. Pharmaceutics, 2022, 14, 463.	2.0	4
519	<scp>RNA</scp> meets toxicology: efficacy indicators from the experimental design of <scp>RNAi</scp> studies for insect pest management. Pest Management Science, 2022, 78, 3215-3225.	1.7	10
520	Inhomogeneous Diastereomeric Composition of Mongersen Antisense Phosphorothioate Oligonucleotide Preparations and Related Pharmacological Activity Impairment. Nucleic Acid Therapeutics, 2022, 32, 312-320.	2.0	8
521	Efficient Divergent Synthesis of 2â€2- <i>O</i> ,4â€2- <i>C</i> -Ethylene-Bridged Nucleic Acid (ENA) Phosphoramidites. Organic Process Research and Development, 2022, 26, 1289-1307.	1.3	3
522	2′- <i>O</i> -(<i>N</i> -(Aminoethyl)carbamoyl)methyl Modification Allows for Lower Phosphorothioate Content in Splice-Switching Oligonucleotides with Retained Activity. Nucleic Acid Therapeutics, 2022, ,	2.0	4
523	Silent mutations reveal therapeutic vulnerability in RAS Q61 cancers. Nature, 2022, 603, 335-342.	13.7	23
524	In vivo assembly and expression of DNA containing nonâ€canonical bases in the yeast Saccharomyces cerevisiae. ChemBioChem, 2022, , .	1.3	4
525	Biosafety assessment of delivery systems for clinical nucleic acid therapeutics. Biosafety and Health, 2022, 4, 105-117.	1.2	15
526	Anionic Lipid Nanoparticles Preferentially Deliver mRNA to the Hepatic Reticuloendothelial System. Advanced Materials, 2022, 34, e2201095.	11.1	66
527	RAB18 is a key regulator of GalNAc-conjugated siRNA-induced silencing in Hep3B cells. Molecular Therapy - Nucleic Acids, 2022, 28, 423-434.	2.3	2
528	Niâ€Catalyzed Crossâ€Coupling of 2″odoglycals and 2″odoribals with Grignard Reagents: A Route to 2― <i>C</i> â€Glycosides and 2'― <i>C</i> â€Nucleosides. Chemistry - A European Journal, 2022, , .	1.7	8
529	Individualized Antisense Oligonucleotide Therapies: How to Approach the Challenge of Manufacturing These Oligos from a Chemistry, Manufacturing, and Control-Regulatory Standpoint. Nucleic Acid Therapeutics, 2022, 32, 101-110.	2.0	3
530	Synthesis and Properties of Artificial Oligonucleotides Containing Novel Nucleoside Analogs with Cationic Alkyl Sidechains. Yuki Gosei Kagaku Kyokaishi/Journal of Synthetic Organic Chemistry, 2021, 79, 1102-1112.	0.0	0

#	Article	IF	CITATIONS
531	Chemical Modifications in Nucleic Acids for Therapeutic and Diagnostic Applications. Chemical Record, 2022, 22, e202100270.	2.9	5
532	Antisense oligonucleotide splicing modulation as a novel Cystic Fibrosis therapeutic approach for the W1282X nonsense mutation. Journal of Cystic Fibrosis, 2022, 21, 630-636.	0.3	18
533	DNA/RNA heteroduplex oligonucleotide technology for regulating lymphocytes in vivo. Nature Communications, 2021, 12, 7344.	5.8	9
534	Synthesis, gene silencing activity, thermal stability, and serum stability of siRNA containing four (<i>S</i>)-5′- <i>C</i> -aminopropyl-2′- <i>O</i> -methylnucleosides (A, adenosine; U, uridine; G, guanosine;)	Tj Æ7 Qq1 1	. 0.7 84314
535	Targeted RNA therapeutics for treatment of cancer and immunomodulation. , 2022, , 37-55.		0
536	CMC: Regulatory landscape. , 2022, , 321-352.		0
537	CMC and regulatory aspects of oligonucleotide therapeutics. , 2022, , 263-320.		0
538	Antisense oligonucleotides ameliorate kidney dysfunction in podocyte-specific APOL1 risk variant mice. Molecular Therapy, 2022, 30, 2491-2504.	3.7	4
539	Nanodelivery of nucleic acids. Nature Reviews Methods Primers, 2022, 2, .	11.8	146
540	Arabinonucleic acids containing C5-propynyl modifications form stable hybrid duplexes with RNA that are efficiently degraded by E. coli RNase H. Bioorganic and Medicinal Chemistry Letters, 2022, 67, 128744.	1.0	2
542	Molecular Therapies for Myotonic Dystrophy Type 1: From Small Drugs to Gene Editing. International Journal of Molecular Sciences, 2022, 23, 4622.	1.8	13
543	Clinical advances of RNA therapeutics for treatment of neurological and neuromuscular diseases. RNA Biology, 2022, 19, 594-608.	1.5	23
544	RNAi-based modulation of IFN-Î ³ signaling in skin. Molecular Therapy, 2022, 30, 2709-2721.	3.7	13
545	Self-delivering RNAi compounds as therapeutic agents in the central nervous system to enhance axonal regeneration after injury. IScience, 2022, 25, 104379.	1.9	0
546	The dynamic, motile and deformative properties of RNA nanoparticles facilitate the third milestone of drug development. Advanced Drug Delivery Reviews, 2022, 186, 114316.	6.6	17
547	Current Advances in Aptamer-based Biomolecular Recognition and Biological Process Regulation. Chemical Research in Chinese Universities, 2022, 38, 847-855.	1.3	6
548	RNA modifications can affect RNase H1-mediated PS-ASO activity. Molecular Therapy - Nucleic Acids, 2022, 28, 814-828.	2.3	7
549	Disrupting autorepression circuitry generates "open-loop lethality―to yield escape-resistant antiviral agents. Cell, 2022, 185, 2086-2102.e22.	13.5	7

#	Article	IF	CITATIONS
550	Covalently attached intercalators restore duplex stability and splice-switching activity to triazole-modified oligonucleotides. RSC Chemical Biology, 0, , .	2.0	3
551	Altering gene expression using antisense oligonucleotide therapy for hearing loss. Hearing Research, 2022, 426, 108523.	0.9	5
552	Delivering siRNA Compounds During HOPE to Modulate Organ Function: A Proof-of-concept Study in a Rat Liver Transplant Model. Transplantation, 2022, 106, 1565-1576.	0.5	13
553	Simultaneous quantification of oligo-nucleic acids and a ferritin nanocage by size-exclusion chromatography hyphenated to inductively coupled plasma mass spectrometry for developing drug delivery systems. Analytical Methods, 2022, 14, 2219-2226.	1.3	2
554	Delivery of RNA Therapeutics: The Great Endosomal Escape!. Nucleic Acid Therapeutics, 2022, 32, 361-368.	2.0	33
555	Cellular uptake, tissue penetration, biodistribution, and biosafety of threose nucleic acids: Assessing in vitro and in vivo delivery. Materials Today Bio, 2022, 15, 100299.	2.6	3
556	Targeted Therapeutics for Rare Disorders. , 2024, , 249-271.		1
557	Gene-specific nonsense-mediated mRNA decay targeting for cystic fibrosis therapy. Nature Communications, 2022, 13, .	5.8	12
558	A novel aptamer-based small RNA delivery platform and its application to cancer therapy. Genes and Diseases, 2023, 10, 1075-1089.	1.5	2
559	Electropolymerizable Thiophene–Oligonucleotides for Electrode Functionalization. ACS Applied Materials & Interfaces, 0, , .	4.0	1
560	MicroRNAs as therapeutic targets in cardiovascular disease. Journal of Clinical Investigation, 2022, 132, .	3.9	50
561	Bioengineered RNA Therapy in Patient-Derived Organoids and Xenograft Mouse Models. Methods in Molecular Biology, 2022, , 191-206.	0.4	1
562	Cas9-mediated DNA cleavage guided by enzymatically prepared 4′-thio-modified RNA. Organic and Biomolecular Chemistry, 0, , .	1.5	0
563	Properties of Parallel Tetramolecular G-Quadruplex Carrying N-Acetylgalactosamine as Potential Enhancer for Oligonucleotide Delivery to Hepatocytes. Molecules, 2022, 27, 3944.	1.7	1
564	Targeting oncogenic KRAS with molecular brush-conjugated antisense oligonucleotides. Proceedings of the United States of America, 2022, 119, .	3.3	14
565	RNAi-Based Therapeutics and Novel RNA Bioengineering Technologies. Journal of Pharmacology and Experimental Therapeutics, 2023, 384, 133-154.	1.3	52
567	Targeted Nanocarrier Delivery of RNA Therapeutics to Control HIV Infection. Pharmaceutics, 2022, 14, 1352.	2.0	1
568	Functional Xeno Nucleic Acids for Biomedical Application. Chemical Research in Chinese Universities, 2022, 38, 912-918.	1.3	4

#	Article	IF	CITATIONS
569	Intracellular Absolute Quantification of Oligonucleotide Therapeutics by NanoSIMS. Analytical Chemistry, 2022, 94, 10549-10556.	3.2	2
572	Functional Xeno Nucleic Acids for Biomedical Application. Chemical Research in Chinese Universities, 0, , .	1.3	3
573	Tuning the Stability of the Polyplex Nanovesicles of Oligonucleotides via a Zinc (II)-Coordinative Strategy. Chinese Journal of Polymer Science (English Edition), 2022, 40, 1034-1042.	2.0	1
574	Smad7 Antisense Oligonucleotide-Based Therapy in Crohn's Disease: Is it Time to Re-Evaluate?. Molecular Diagnosis and Therapy, 2022, 26, 477-481.	1.6	8
575	Pharmacokinetic and Pharmacodynamic Modeling of siRNA Therapeutics – a Minireview. Pharmaceutical Research, 2022, 39, 1749-1759.	1.7	19
576	Precision Anti-Cancer Medicines by Oligonucleotide Therapeutics in Clinical Research Targeting Undruggable Proteins and Non-Coding RNAs. Pharmaceutics, 2022, 14, 1453.	2.0	6
577	Analytical techniques for characterizing diastereomers of phosphorothioated oligonucleotides. Journal of Chromatography A, 2022, 1678, 463349.	1.8	9
578	An LNA-amide modification that enhances the cell uptake and activity of phosphorothioate exon-skipping oligonucleotides. Nature Communications, 2022, 13, .	5.8	16
579	The impact of low adsorption surfaces for the analysis of DNA and RNA oligonucleotides. Journal of Chromatography A, 2022, 1677, 463324.	1.8	15
580	RNA interference protocol to silence oncogenic drivers in leukemia cell lines. STAR Protocols, 2022, 3, 101512.	0.5	2
581	Analysis of therapeutic nucleic acids by capillary electrophoresis. Journal of Pharmaceutical and Biomedical Analysis, 2022, 219, 114928.	1.4	10
582	A modular XNAzyme cleaves long, structured RNAs under physiological conditions and enables allele-specific gene silencing. Nature Chemistry, 2022, 14, 1295-1305.	6.6	27
583	RNA-based therapeutics: an overview and prospectus. Cell Death and Disease, 2022, 13, .	2.7	137
584	Binary Antisense Oligonucleotide Agent for Cancer Marker-Dependent Degradation of Targeted RNA. Nucleic Acid Therapeutics, 2022, 32, 412-420.	2.0	4
585	Synthesis of a Convertible Linker Containing a Disulfide Group for Oligonucleotide Functionalization. Organic Letters, 0, , .	2.4	4
586	New Aspects on the Treatment of Retinopathy of Prematurity: Currently Available Therapies and Emerging Novel Therapeutics. International Journal of Molecular Sciences, 2022, 23, 8529.	1.8	19
587	Role of a "Magic―Methyl: 2′-Deoxy-2′-α-F-2′-β- <i>C</i> -methyl Pyrimidine Nucleotides Modulate R Interference Activity through Synergy with 5′-Phosphate Mimics and Mitigation of Off-Target Effects. Journal of the American Chemical Society, 2022, 144, 14517-14534.	NA 6.6	7
588	Generating experimentally unrelated target molecule-binding highly functionalized nucleic-acid polymers using machine learning. Nature Communications, 2022, 13, .	5.8	10

#	Article	IF	CITATIONS
589	Intratracheally administered LNA gapmer antisense oligonucleotides induce robust gene silencing in mouse lung fibroblasts. Nucleic Acids Research, 2022, 50, 8418-8430.	6.5	13
590	Synthesis and Properties of Oligonucleotides Containing 2′- <i>O</i> ,4′- <i>C</i> -Methyleneoxy-Bridged Pyrimidine Derivatives. Journal of Organic Chemistry, 2022, 87, 11743-11750.	1.7	2
591	Immune Checkpoint Inhibitors for Vaccine Improvements: Current Status and New Approaches. Pharmaceutics, 2022, 14, 1721.	2.0	10
592	Photoactivatable Silencing Extracellular Vesicle (PASEV) Sensitizes Cancer Immunotherapy. Advanced Materials, 2022, 34, .	11.1	27
593	Radiolabeling of functional oligonucleotides for molecular imaging. Frontiers in Bioengineering and Biotechnology, 0, 10, .	2.0	7
594	Therapeutic siRNA: State-of-the-Art and Future Perspectives. BioDrugs, 2022, 36, 549-571.	2.2	88
595	Development of 5-FU-modified tumor suppressor microRNAs as a platform for novel microRNA-based cancer therapeutics. Molecular Therapy, 2022, 30, 3450-3461.	3.7	6
596	Harnessing nucleic acid technologies for human health on earth and in space. Life Sciences in Space Research, 2022, 35, 113-126.	1.2	2
597	Engineered ionizable lipid siRNA conjugates enhance endosomal escape but induce toxicity in vivo. Journal of Controlled Release, 2022, 349, 831-843.	4.8	13
598	Long Non-coding RNA Therapeutics: Recent Advances and Challenges. Current Drug Targets, 2022, 23, 1457-1464.	1.0	3
599	Nucleic acid therapy in pediatric cancer. Pharmacological Research, 2022, 184, 106441.	3.1	3
600	Synthesis of 2′-O-[3-(N-methylsulfamoyl)propan-1-yl]ribothymidine as a potentially applicable 2′-modified nucleoside for antisense oligonucleotides. Bioorganic and Medicinal Chemistry, 2022, 73, 117002.	1.4	1
601	Polymeric micelles for drug delivery in oncology with an emphasis on siRNA conveyance. , 2022, , 199-284.		0
602	Promotion of cytoplasmic localization of oligonucleotides by connecting cross-linked duplexes. RSC Advances, 2022, 12, 24471-24477.	1.7	0
603	Glycoconjugates: Synthesis, Functional Studies, and Therapeutic Developments. Chemical Reviews, 2022, 122, 15603-15671.	23.0	38
608	Synthesis, Duplex-Forming Ability, and Nuclease Resistance of Oligonucleotides Containing a Thymidine Derivative with a 1-Oxaspiro[4.5]decane Skeleton. Chemical and Pharmaceutical Bulletin, 2022, 70, 699-706.	0.6	0
609	Recent advances in targeted delivery of non-coding RNA-based therapeutics for atherosclerosis. Molecular Therapy, 2022, 30, 3118-3132.	3.7	15
610	Development of the Right- and Left-Handed Gamma Peptide Nucleic Acid Building Blocks for On-Resin Chemical Functionalization. Journal of Organic Chemistry, 2022, 87, 13873-13881.	1.7	1

#	Article	IF	CITATIONS
611	Chemical engineering of therapeutic siRNAs for allele-specific gene silencing in Huntington's disease models. Nature Communications, 2022, 13, .	5.8	11
612	Design and Self-Assembly of Therapeutic Nucleic Acid Nanoparticles (NANPs) with Controlled Immunological Properties. , 2022, , 1-29.		0
613	Nucleoside Analogs in ADAR Guide Strands Targeting 5'-UA sites RSC Chemical Biology, 0, , .	2.0	2
614	Insertion of a methylene group into the backbone of an antisense oligonucleotide reveals the importance of deoxyribose recognition by RNase H. Organic and Biomolecular Chemistry, 2022, 20, 8917-8924.	1.5	1
615	A perspective on oligonucleotide therapy: Approaches to patient customization. Frontiers in Pharmacology, 0, 13, .	1.6	23
616	An overview of structural approaches to study therapeutic RNAs. Frontiers in Molecular Biosciences, 0, 9, .	1.6	0
617	The Natural Antisense Transcript-Targeted Regulation Technology Using Sense Oligonucleotides and Its Application. , 0, , .		0
619	Parallel synthesis of oligonucleotides containing <i>N</i> -acyl amino-LNA and their therapeutic effects as anti-microRNAs. Organic and Biomolecular Chemistry, 2022, 20, 9351-9361.	1.5	2
620	Radiolabelling small and biomolecules for tracking and monitoring. RSC Advances, 2022, 12, 32383-32400.	1.7	11
621	A mechanistic study on the cellular uptake, intracellular trafficking, and antisense gene regulation of bottlebrush polymer-conjugated oligonucleotides. RSC Chemical Biology, 2023, 4, 138-145.	2.0	3
622	miRNA and antisense oligonucleotide-based α-synuclein targeting as disease-modifying therapeutics in Parkinson's disease. Frontiers in Pharmacology, 0, 13, .	1.6	3
623	CNS Delivery of Nucleic Acid Therapeutics: Beyond the Blood–Brain Barrier and Towards Specific Cellular Targeting. Pharmaceutical Research, 2023, 40, 77-105.	1.7	9
624	Surface Design Options in Polymer- and Lipid-Based siRNA Nanoparticles Using Antibodies. International Journal of Molecular Sciences, 2022, 23, 13929.	1.8	3
625	Nano drug delivery systems for antisense oligonucleotides (ASO) therapeutics. Journal of Controlled Release, 2022, 352, 861-878.	4.8	21
626	Biocatalytic Synthesis of Antiviral Nucleosides, Cyclic Dinucleotides, and Oligonucleotide Therapies. Jacs Au, 2023, 3, 13-24.	3.6	14
627	Optimization of the technology for obtaining guide RNA using plate automatic synthesizer. Proceedings of the National Academy of Sciences of Belarus, Chemical Series, 2022, 58, 398-406.	0.1	0
628	Developing New Tools to Fight Human Pathogens: A Journey through the Advances in RNA Technologies. Microorganisms, 2022, 10, 2303.	1.6	1
629	Cancer Stem Cells—The Insight into Non-Coding RNAs. Cells, 2022, 11, 3699.	1.8	2

#	Article	IF	CITATIONS
 630	Knockdown of Circular RNAs Using LNA-Modified Antisense Oligonucleotides. Nucleic Acid Therapeutics, 0, , .	2.0	1
631	RNA Therapeutics for Improving CAR T-cell Safety and Efficacy. Cancer Research, 2023, 83, 354-362.	0.4	6
632	The Promising Therapeutic Potential of Oligonucleotides for Pulmonary Fibrotic Diseases. Expert Opinion on Drug Discovery, 2023, 18, 193-206.	2.5	3
634	A comprehensive update of siRNA delivery design strategies for targeted and effective gene silencing in gene therapy and other applications. Expert Opinion on Drug Discovery, 2023, 18, 149-161.	2.5	5
635	Exploring the Regulatory Role of ncRNA in NAFLD: A Particular Focus on PPARs. Cells, 2022, 11, 3959.	1.8	3
636	Enzymatic Conjugation of Modified RNA Fragments by Ancestral RNA Ligase AncT4_2. Applied and Environmental Microbiology, 2022, 88, .	1.4	2
637	Liquid crystal phase formation and non-Newtonian behavior of oligonucleotide formulations. European Journal of Pharmaceutics and Biopharmaceutics, 2022, 181, 270-281.	2.0	2
638	New Molecular Technologies for Oligonucleotide Therapeutics-2: A-Type Nucleic Acid Duplex-Specific Binding Oligocationic Molecules for Oligonucleotide Therapeutics. , 2023, , 1-13.		0
639	2′-N-Alkylaminocarbonyl-2′-amino-LNA: Synthesis, duplex stability, nuclease resistance, and in vitro anti-microRNA activity. Bioorganic and Medicinal Chemistry, 2023, 78, 117148.	1.4	2
640	Refractive Index to Monitor Solid-Phase Oligonucleotide Synthesis. Organic Process Research and Development, 2023, 27, 65-77.	1.3	2
641	Chemical Modifications Influence the Number of siRNA Molecules Adsorbed on Gold Nanoparticles and the Efficiency of Downregulation of a Target Protein. Nanomaterials, 2022, 12, 4450.	1.9	2
642	Demethylation of dimethyl phosphonate esters with sodium ethanethiolate: Improved synthesis of 5′-methylene substituted 2′,5′-deoxyribonucleotides. Nucleosides, Nucleotides and Nucleic Acids, 0, , 1-9.	0.4	0
644	Benzo-Fused 7-Oxabicyclo[2.2.1]heptane-2,3-diol Derivatives as Universal Linkers for Solid-Phase Oligonucleotide Synthesis. Synthesis, 2023, 55, 1112-1122.	1.2	0
645	Quantitative Microscopic Observation of Base–Ligand Interactions via Hydrogen Bonds by Single-Molecule Counting. Journal of the American Chemical Society, 2023, 145, 1310-1318.	6.6	4
646	Structural Modifications of siRNA Improve Its Performance In Vivo. International Journal of Molecular Sciences, 2023, 24, 956.	1.8	4
647	The MOE Modification of RNA: Origins and Widescale Impact on the Oligonucleotide Therapeutics Field. Helvetica Chimica Acta, 2023, 106, .	1.0	4
648	Multivalent mannose-conjugated siRNA causes robust gene silencing in pancreatic macrophages in vivo. European Journal of Pharmaceutics and Biopharmaceutics, 2023, 183, 61-73.	2.0	3
649	Synthesis of $2\hat{a}\in^2$ -modified N6-methyladenosine phosphoramidites and their incorporation into siRNA. Bioorganic and Medicinal Chemistry Letters, 2023, 81, 129126.	1.0	1

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#	Article	IF	CITATIONS
650	Non-viral nucleic acid delivery approach: A boon for state-of-the-art gene delivery. Journal of Drug Delivery Science and Technology, 2023, 80, 104152.	1.4	1
651	Liver cancer cells as the model for developing liver-targeted RNAi therapeutics. Biochemical and Biophysical Research Communications, 2023, 644, 85-94.	1.0	1
652	8–17 DNAzyme Silencing Gene Expression in Cells via Cleavage and Antisense. Molecules, 2023, 28, 286.	1.7	0
653	Amide Modifications in the Seed Region of the Guide Strand Improve the On-Target Specificity of Short Interfering RNA. ACS Chemical Biology, 2023, 18, 7-11.	1.6	3
654	Smad7 Antisense Oligonucleotide in Crohn's Disease: A Re-Evaluation and Explanation for the Discordant Results of Clinical Trials. Pharmaceutics, 2023, 15, 95.	2.0	0
655	Molecular elements: novel approaches for molecular building. Philosophical Transactions of the Royal Society B: Biological Sciences, 2023, 378, .	1.8	2
656	Nanomaterials for Therapeutic Nucleic Acid Delivery. , 2022, , 1-29.		0
657	Antisense Oligonucleotide Therapeutics for Cystic Fibrosis: Recent Developments and Perspectives. Molecules and Cells, 2023, 46, 10-20.	1.0	9
658	Efficient Targeted Delivery of Bifunctional Circular Aptamerâ€ASO Chimera to Suppress the SARS oVâ€2 Proliferation and Inflammation. Small, 2023, 19, .	5.2	3
659	RNAi in cell nuclei: potential for a new layer of biological regulation and a new strategy for therapeutic discovery. Rna, 2023, 29, 415-422.	1.6	8
660	Lipid and Peptide-Oligonucleotide Conjugates for Therapeutic Purposes: From Simple Hybrids to Complex Multifunctional Assemblies. Pharmaceutics, 2023, 15, 320.	2.0	9
661	EFMC: Trends in Medicinal Chemistry and Chemical Biology. ChemBioChem, 2023, 24, .	1.3	2
662	Targeted delivery of oligonucleotides using multivalent protein–carbohydrate interactions. Chemical Society Reviews, 2023, 52, 1273-1287.	18.7	12
663	Amides and Other Nonionic Backbone Modifications in RNA. , 2023, , 1-21.		0
664	Investigation of Sequenceâ€Penetration Relationships of Antisense Oligonucleotides. ChemBioChem, 2023, 24, .	1.3	1
665	Endosomal escape of RNA therapeutics: How do we solve this rate-limiting problem?. Rna, 2023, 29, 396-401.	1.6	17
666	A novel miRNA mimic attenuates organ injury after hepatic ischemia/reperfusion. Journal of Trauma and Acute Care Surgery, 2023, 94, 702-709.	1.1	2
667	Chemical Control of CRISPR Gene Editing via Conditional Diacylation Crosslinking of Guide RNAs. Advanced Science, 2023, 10, .	5.6	1

#	Article	IF	CITATIONS
668	An engineered miRNA PS-OMe miR130 inhibits acute lung injury by targeting eCIRP in sepsis. Molecular Medicine, 2023, 29, .	1.9	3
669	High-Efficiency 3D DNA Walker Immobilized by a DNA Tetrahedral Nanostructure for Fast and Ultrasensitive Electrochemical Detection of MiRNA. Analytical Chemistry, 2023, 95, 4077-4085.	3.2	10
670	Optimized workflow to modify microRNA expression in primary human intravascular cells. BMC Immunology, 2023, 24, .	0.9	3
671	Aberrant splicing in human cancer: An RNA structural code point of view. Frontiers in Pharmacology, 0, 14, .	1.6	0
672	Preparation of a Convertible Spacer Containing a Disulfide Group for Versatile Functionalization of Oligonucleotides. Current Protocols, 2023, 3, .	1.3	0
673	Development of human-machine language interfaces for the visual analysis of complex biologics and RNA modalities and associated experimental data. AAPS Open, 2023, 9, .	0.4	1
674	Oligonucleotides Containing C5â€Propynyl Modified Arabinonucleic Acids: Synthesis, Biophysical and Antisense Properties. ChemBioChem, 2023, 24, .	1.3	1
675	Advances in RNA cancer therapeutics: New insight into exosomes as miRNA delivery. , 2023, 1, 100005.		4
676	Diabetic cardiomyopathy: The role of microRNAs and long non-coding RNAs. Frontiers in Endocrinology, 0, 14, .	1.5	4
677	Divalent siRNAs are bioavailable in the lung and efficiently block SARS-CoV-2 infection. Proceedings of the National Academy of Sciences of the United States of America, 2023, 120, .	3.3	9
680	Recombinant Technologies Facilitate Drug Metabolism, Pharmacokinetics, and General Biomedical Research. Drug Metabolism and Disposition, 2023, 51, 685-699.	1.7	5
681	Fluorescent indicator displacement assay for the discovery of UGGAA repeat-targeted small molecules. Chemical Communications, 0, , .	2.2	2
682	A Review of Tangential Flow Filtration: Process Development and Applications in the Pharmaceutical Industry. Organic Process Research and Development, 2023, 27, 571-591.	1.3	6
683	Enhancing the Effectiveness of Oligonucleotide Therapeutics Using Cell-Penetrating Peptide Conjugation, Chemical Modification, and Carrier-Based Delivery Strategies. Pharmaceutics, 2023, 15, 1130.	2.0	11
684	Functionalization of acyclic xenonucleic acid with modified nucleobases. Polymer Journal, 2023, 55, 743-752.	1.3	1
685	Factors Influencing ADME properties of therapeutic antisense oligonucleotides: physicochemical characteristics and beyond. Current Drug Metabolism, 2023, 24, .	0.7	1
686	Electrostatic Attractive Selfâ€Delivery of siRNA and Lightâ€Induced Selfâ€Escape for Synergistic Gene Therapy. Advanced Materials, 2023, 35, .	11.1	9
691	Nucleic Acid Therapeutics. , 2022, , 350-402.		0

#	Article	IF	CITATIONS
692	New Therapeutic Chemical Modalities: Compositions, Modes-of-action, and Drug Discovery. , 2023, , 911-961.		0
704	External Stimulation-Responsive Artificial Nucleic Acids: Peptide Ribonucleic Acid (PRNA)-Programmed Assemblies. , 2023, , 1-26.		0
705	Drug-Grafted DNA for Cancer Therapy. Journal of Physical Chemistry B, 2023, 127, 5379-5388.	1.2	0
708	ADME considerations for siRNA-based therapeutics. , 2023, , 41-50.		0
713	Therapeutic targeting non-coding RNAs. , 2023, , 349-417.		0
718	5-Dihydroxyboryluridine enhances cytosolic penetration of antisense oligonucleotides. Chemical Communications, 2023, 59, 8692-8695.	2.2	1
727	Design and Self-Assembly of Therapeutic Nucleic Acid Nanoparticles (NANPs) with Controlled Immunological Properties. , 2023, , 1975-2003.		0
728	Amides and Other Nonionic Backbone Modifications in RNA. , 2023, , 2339-2359.		0
729	External Stimulation-Responsive Artificial Nucleic Acids: Peptide Ribonucleic Acid (PRNA)-Programmed Assemblies. , 2023, , 2747-2772.		0
730	New Molecular Technologies for Oligonucleotide Therapeutics-2: A-Type Nucleic Acid Duplex-Specific Binding Oligocationic Molecules for Oligonucleotide Therapeutics. , 2023, , 2323-2335.		0
731	Nanomaterials for Therapeutic Nucleic Acid Delivery. , 2023, , 2005-2033.		0
744	Topological capture of mRNA for silencing gene expression. Chemical Communications, 2023, 59, 11564-11567.	2.2	0
745	Establishing stereochemical comparability in phosphorothioate oligonucleotides with nuclease P1 digestion coupled with LCMS analysis. Analyst, The, 2023, 148, 5361-5365.	1.7	0
746	Long Non-coding RNA Involved in the Pathophysiology of Atrial Fibrillation. Cardiovascular Drugs and Therapy, 0, , .	1.3	Ο
751	Innovative Strategies in Drug Discovery and Pharmacoinformatics. , 2023, , 145-192.		0
771	The Modification Strategies for Enhancing the Metabolic Stabilities and Pharmacokinetics of Aptamer Drug Candidates. , 0, , .		0
773	Alternative therapeutic strategies to treat antibiotic-resistant pathogens. Nature Reviews Microbiology, 0, , .	13.6	2
784	Nucleoside modification-based flexizymes with versatile activity for tRNA aminoacylation. Chemical Communications, 2024, 60, 1607-1610.	2.2	0

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#	Article	IF	CITATIONS
	PNA therapeutics for Î2-thalassemia. Progress in Molecular Biology and Translational Science, 2024		
788	97-107.	0.9	0
789	RNA therapeutics history and future perspectives. Progress in Molecular Biology and Translational Science, 2024, , 99-114.	0.9	Ο
790	RNA therapeutics for the treatment of blood disorders. Progress in Molecular Biology and Translational Science, 2024, , 273-286.	0.9	0
802	Huntingtin lowering therapeutics. , 2024, , 523-549.		0
805	Overview of the Nonclinical Development Strategies and Class Effects of Oligonucleotide-based Therapeutics. , 2024, , 769-790.		0