Anastasia Khvorova

List of Publications by Year
in descending order

68 papers	17,441 citations	117625 34 h-index	98798 67 g-index
75 all docs	75 docs citations	75 times ranked	21497 citing authors

#	Article	IF	Citations
1	An RNAi therapeutic targeting hepatic DGAT2 in a genetically obese mouse model of nonalcoholic steatohepatitis. Molecular Therapy, 2022, 30, 1329-1342.	8.2	18
2	RNAi-based modulation of IFN-Î³ signaling in skin. Molecular Therapy, 2022, 30, 2709-2721.	8.2	13
3	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.	1.0	13
4	Chemical optimization of siRNA for safe and efficient silencing of placental sFLT1. Molecular Therapy - Nucleic Acids, 2022, 29, 135-149.	5.1	15
5	Modulation of DNA transcription: The future of ASO therapeutics?. Cell, 2022, 185, 2011-2013.	28.9	5
6	PK-modifying anchors significantly alter clearance kinetics, tissue distribution, and efficacy of therapeutics siRNAs. Molecular Therapy - Nucleic Acids, 2022, 29, 116-132.	5.1	7
7	Docosanoic acid conjugation to siRNA enables functional and safe delivery to skeletal and cardiac muscles. Molecular Therapy, 2021, 29, 1382-1394.	8.2	37
8	The NIH Somatic Cell Genome Editing program. Nature, 2021, 592, 195-204.	27.8	84
9	AIM2 regulates anti-tumor immunity and is a viable therapeutic target for melanoma. Journal of Experimental Medicine, 2021, 218, .	8.5	34
10	Gene therapy with AR isoform 2 rescues spinal and bulbar muscular atrophy phenotype by modulating AR transcriptional activity. Science Advances, 2021, 7, .	10.3	20
11	Structurally constrained phosphonate internucleotide linkage impacts oligonucleotide-enzyme interaction, and modulates siRNA activity and allele specificity. Nucleic Acids Research, 2021, 49, 12069-12088.	14.5	8
12	Comparative route of administration studies using therapeutic siRNAs show widespread gene modulation in Dorset sheep. JCI Insight, 2021, 6, .	5.0	9
13	Loss of huntingtin function slows synaptic vesicle endocytosis in striatal neurons from the httQ140/Q140 mouse model of Huntington's disease. Neurobiology of Disease, 2020, 134, 104637.	4.4	24
14	Enriched chitosan nanoparticles loaded with siRNA are effective in lowering Huntington's disease gene expression following intranasal administration. Nanomedicine: Nanotechnology, Biology, and Medicine, 2020, 24, 102119.	3.3	55
15	Hydrophobically Modified let-7b miRNA Enhances Biodistribution to NSCLC and Downregulates HMGA2 InÂVivo. Molecular Therapy - Nucleic Acids, 2020, 19, 267-277.	5.1	39
16	Cell Type Impacts Accessibility of mRNA to Silencing by RNA Interference. Molecular Therapy - Nucleic Acids, 2020, 21, 384-393.	5.1	20
17	The chemical structure and phosphorothioate content of hydrophobically modified siRNAs impact extrahepatic distribution and efficacy. Nucleic Acids Research, 2020, 48, 7665-7680.	14.5	32
18	Single-Stranded Phosphorothioated Regions Enhance Cellular Uptake of Cholesterol-Conjugated siRNA but Not Silencing Efficacy. Molecular Therapy - Nucleic Acids, 2020, 21, 991-1005.	5.1	22

#	Article	IF	Citations
19	2â€²-O-Methyl at 20-mer Guide Strand 3â€² Termini May Negatively Affect Target Silencing Activity of Fully Chemically Modified siRNA. Molecular Therapy - Nucleic Acids, 2020, 21, 266-277.	5.1	10
20	Data on enrichment of chitosan nanoparticles for intranasal delivery of oligonucleotides to the brain. Data in Brief, 2020, 28, 105093.	1.0	3
21	A divalent siRNA chemical scaffold for potent and sustained modulation of gene expression throughout the central nervous system. Nature Biotechnology, 2019, 37, 884-894.	17.5	126
22	Hydrophobicity drives the systemic distribution of lipid-conjugated siRNAs via lipid transport pathways. Nucleic Acids Research, 2019, 47, 1070-1081.	14.5	87
23	Serum Deprivation of Mesenchymal Stem Cells Improves Exosome Activity and Alters Lipid and Protein Composition. IScience, 2019, 16, 230-241.	4.1	61
24	Nucleic Acid Therapeutics for Neurological Diseases. Neurotherapeutics, 2019, 16, 245-247.	4.4	16
25	The valency of fatty acid conjugates impacts siRNA pharmacokinetics, distribution, and efficacy in vivo. Journal of Controlled Release, 2019, 302, 116-125.	9.9	48
26	Gene Silencing With siRNA (RNA Interference): A New Therapeutic Option During Ex Vivo Machine Liver Perfusion Preservation. Liver Transplantation, 2019, 25, 140-151.	2.4	47
27	Diverse lipid conjugates for functional extra-hepatic siRNA delivery<i>in vivo</i>. Nucleic Acids Research, 2019, 47, 1082-1096.	14.5	122
28	Rac1 Activity Is Modulated by Huntingtin and Dysregulated in Models of Huntingtonâ€™s Disease. Journal of Huntington's Disease, 2019, 8, 53-69.	1.9	23
29	Editorial: Nucleic Acids Research and Nucleic Acid Therapeutics. Nucleic Acids Research, 2018, 46, 1563-1564.	14.5	8
30	Efficient Gene Silencing in Brain Tumors with Hydrophobically Modified siRNAs. Molecular Cancer Therapeutics, 2018, 17, 1251-1258.	4.1	14
31	Comparison of partially and fully chemically-modified siRNA in conjugate-mediated delivery in vivo. Nucleic Acids Research, 2018, 46, 2185-2196.	14.5	125
32	Loading of Extracellular Vesicles with Hydrophobically Modified siRNAs. Methods in Molecular Biology, 2018, 1740, 199-214.	0.9	13
33	Hydrophobicity of Lipid-Conjugated siRNAs Predicts Productive Loading to Small Extracellular Vesicles. Molecular Therapy, 2018, 26, 1520-1528.	8.2	31
34	Chitosan-Mangafodipir nanoparticles designed for intranasal delivery of siRNA and DNA to brain. Journal of Drug Delivery Science and Technology, 2018, 43, 453-460.	3.0	41
35	Functional features defining the efficacy of cholesterol-conjugated, self-deliverable, chemically modified siRNAs. Nucleic Acids Research, 2018, 46, 10905-10916.	14.5	48
36	RNAi modulation of placental sFLT1 for the treatment of preeclampsia. Nature Biotechnology, 2018, 36, 1164-1173.	17.5	126

#	Article	IF	Citations
37	Minimal information for studies of extracellular vesicles 2018 (MISEV2018): a position statement of the International Society for Extracellular Vesicles and update of the MISEV2014 guidelines. Journal of Extracellular Vesicles, 2018, 7, 1535750.	12.2	6,961
38	Exosomes Produced from 3D Cultures of MSCs by Tangential Flow Filtration Show Higher Yield and Improved Activity. Molecular Therapy, 2018, 26, 2838-2847.	8.2	309
39	Nuclear Localization of Huntingtin mRNA Is Specific to Cells of Neuronal Origin. Cell Reports, 2018, 24, 2553-2560.e5.	6.4	34
40	Optimized Cholesterol-siRNA Chemistry Improves Productive Loading onto Extracellular Vesicles. Molecular Therapy, 2018, 26, 1973-1982.	8.2	65
41	Heavily and fully modified RNAs guide efficient SpyCas9-mediated genome editing. Nature Communications, 2018, 9, 2641.	12.8	83
42	Improving siRNA Delivery<i>In Vivo</i>Through Lipid Conjugation. Nucleic Acid Therapeutics, 2018, 28, 128-136.	3.6	90
43	Transvascular Delivery of Hydrophobically Modified siRNAs: Gene Silencing in the Rat Brain upon Disruption of the Blood-Brain Barrier. Molecular Therapy, 2018, 26, 2580-2591.	8.2	36
44	Novel Cluster and Monomer-Based GalNAc Structures Induce Effective Uptake of siRNAs in Vitro and in Vivo. Bioconjugate Chemistry, 2018, 29, 2478-2488.	3.6	32
45	Disrupting The Brain Keeper To Allow Silencing Of Deleterious Genes In The Nervous System. , 2018, , .		0
46	The chemical evolution of oligonucleotide therapies of clinical utility. Nature Biotechnology, 2017, 35, 238-248.	17.5	816
47	Synthesis and Evaluation of Parenchymal Retention and Efficacy of a Metabolically Stable <i>O</i>-Phosphocholine-<i>N</i>-docosahexaenoyl-<scp>l</scp>-serine siRNA Conjugate in Mouse Brain. Bioconjugate Chemistry, 2017, 28, 1758-1766.	3.6	33
48	5Î„-Vinylphosphonate improves tissue accumulation and efficacy of conjugated siRNAs in vivo. Nucleic Acids Research, 2017, 45, 7581-7592.	14.5	83
49	Oligonucleotide Therapeutics â€" A New Class of Cholesterol-Lowering Drugs. New England Journal of Medicine, 2017, 376, 4-7.	27.0	128
50	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.	3.6	37
51	Visualization of self-delivering hydrophobically modified siRNA cellular internalization. Nucleic Acids Research, 2017, 45, 15-25.	14.5	119
52	Loading of Extracellular Vesicles with Chemically Stabilized Hydrophobic siRNAs for the Treatment of Disease in the Central Nervous System. Bio-protocol, 2017, 7, .	0.4	9
53	A High-throughput Assay for mRNA Silencing in Primary Cortical Neurons in vitro with Oligonucleotide Therapeutics. Bio-protocol, 2017, 7, .	0.4	6
54	Highâ€resolution proteomic and lipidomic analysis of exosomes and microvesicles from different cell sources. Journal of Extracellular Vesicles, 2016, 5, 32570.	12.2	503

#	Article	IF	Citations
55	Exosome-mediated Delivery of Hydrophobically Modified siRNA for Huntingtin mRNA Silencing. Molecular Therapy, 2016, 24, 1836-1847.	8.2	351
56	Docosahexaenoic Acid Conjugation Enhances Distribution and Safety of siRNA upon Local Administration in Mouse Brain. Molecular Therapy - Nucleic Acids, 2016, 5, e344.	5.1	67
57	A High-Throughput Method for Direct Detection of Therapeutic Oligonucleotide-Induced Gene Silencing<i>In Vivo</i>. Nucleic Acid Therapeutics, 2016, 26, 86-92.	3.6	38
58	Guanabenz (Wytensinâ„¢) selectively enhances uptake and efficacy of hydrophobically modified siRNAs. Nucleic Acids Research, 2015, 43, 8664-8672.	14.5	39
59	Hydrophobically Modified siRNAs Silence Huntingtin mRNA in Primary Neurons and Mouse Brain. Molecular Therapy - Nucleic Acids, 2015, 4, e266.	5.1	115
60	Taking charge of siRNA delivery. Nature Biotechnology, 2014, 32, 1197-1198.	17.5	17
61	Novel Hydrophobically Modified Asymmetric RNAi Compounds (sd-rxRNA) Demonstrate Robust Efficacy in the Eye. Journal of Ocular Pharmacology and Therapeutics, 2013, 29, 855-864.	1.4	67
62	Identifying siRNA-Induced Off-Targets by Microarray Analysis. Methods in Molecular Biology, 2008, 442, 45-63.	0.9	28
63	Experimental validation of the importance of seed complement frequency to siRNA specificity. Rna, 2008, 14, 853-861.	3.5	122
64	A protocol for designing siRNAs with high functionality and specificity. Nature Protocols, 2007, 2, 2068-2078.	12.0	197
65	3â€² UTR seed matches, but not overall identity, are associated with RNAi off-targets. Nature Methods, 2006, 3, 199-204.	19.0	782
66	Position-specific chemical modification of siRNAs reduces "off-target" transcript silencing. Rna, 2006, 12, 1197-1205.	3.5	686
67	Rational siRNA design for RNA interference. Nature Biotechnology, 2004, 22, 326-330.	17.5	1,856
68	Functional siRNAs and miRNAs Exhibit Strand Bias. Cell, 2003, 115, 209-216.	28.9	2,320