

Peter A Beal

List of Publications by Year in descending order

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66
papers

2,571
citations

186209

28
h-index

214721

47
g-index

67
all docs

67
docs citations

67
times ranked

3045
citing authors

#	ARTICLE	IF	CITATIONS
1	Identifying metabolites by integrating metabolome databases with mass spectrometry cheminformatics. <i>Nature Methods</i> , 2018, 15, 53-56.	9.0	368
2	Structures of human ADAR2 bound to dsRNA reveal base-flipping mechanism and basis for site selectivity. <i>Nature Structural and Molecular Biology</i> , 2016, 23, 426-433.	3.6	154
3	RNA editing changes the lesion specificity for the DNA repair enzyme NEIL1. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 20715-20719.	3.3	132
4	DNA capture by a CRISPR-Cas9-guided adenine base editor. <i>Science</i> , 2020, 369, 566-571.	6.0	114
5	Chemical Modification of siRNA Bases To Probe and Enhance RNA Interference. <i>Journal of Organic Chemistry</i> , 2011, 76, 7295-7300.	1.7	87
6	Nucleobase and Ribose Modifications Control Immunostimulation by a MicroRNA-122-mimetic RNA. <i>Journal of the American Chemical Society</i> , 2011, 133, 9200-9203.	6.6	70
7	6-Bromopurine Nucleosides as Reagents for Nucleoside Analogue Synthesis. <i>Journal of Organic Chemistry</i> , 2001, 66, 8592-8598.	1.7	69
8	The Binding Selectivity of ADAR2's dsRBMs Contributes to RNA-Editing Selectivity. <i>Chemistry and Biology</i> , 2004, 11, 1239-1250.	6.2	67
9	Novel Modifications in RNA. <i>ACS Chemical Biology</i> , 2012, 7, 100-109.	1.6	67
10	Analysis of the RNA-Editing Reaction of ADAR2 with Structural and Fluorescent Analogues of the GluR-B R/G Editing Site. <i>Biochemistry</i> , 2000, 39, 12243-12251.	1.2	62
11	Substrate Analogues for an RNA-Editing Adenosine Deaminase: A Mechanistic Investigation and Inhibitor Design. <i>Journal of the American Chemical Society</i> , 2003, 125, 10867-10876.	6.6	61
12	On-Enzyme Refolding Permits Small RNA and tRNA Surveillance by the CCA-Adding Enzyme. <i>Cell</i> , 2015, 160, 644-658.	13.5	61
13	Conformational Changes That Occur during an RNA-editing Adenosine Deamination Reaction. <i>Journal of Biological Chemistry</i> , 2001, 276, 37827-37833.	1.6	53
14	DNA editing in DNA/RNA hybrids by adenosine deaminases that act on RNA. <i>Nucleic Acids Research</i> , 2017, 45, gkx050.	6.5	53
15	ADAR Proteins: Structure and Catalytic Mechanism. <i>Current Topics in Microbiology and Immunology</i> , 2011, 353, 1-33.	0.7	48
16	Differentiating Positional Isomers of Nucleoside Modifications by Higher-Energy Collisional Dissociation Mass Spectrometry (HCD MS). <i>Journal of the American Society for Mass Spectrometry</i> , 2018, 29, 1745-1756.	1.2	43
17	² -Modified 2-aminopurine ribonucleosides as minor-groove-modulating adenosine replacements in duplex RNA. <i>Organic Letters</i> , 2010, 12, 1044-1047.	2.4	41
18	How do ADARs bind RNA? New protein-RNA structures illuminate substrate recognition by the RNA editing ADARs. <i>BioEssays</i> , 2017, 39, 1600187.	1.2	41

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19	Off-Target Editing by CRISPR-Guided DNA Base Editors. <i>Biochemistry</i> , 2019, 58, 3727-3734.	1.2	40
20	RNA-Seq Analysis Identifies a Novel Set of Editing Substrates for Human ADAR2 Present in <i>Saccharomyces cerevisiae</i> . <i>Biochemistry</i> , 2013, 52, 7857-7869.	1.2	38
21	Recognition of duplex RNA by the deaminase domain of the RNA editing enzyme ADAR2. <i>Nucleic Acids Research</i> , 2015, 43, 1123-1132.	6.5	38
22	A Transition State Analogue for an RNA-Editing Reaction. <i>Journal of the American Chemical Society</i> , 2004, 126, 11213-11219.	6.6	35
23	Structure-Guided Control of siRNA Off-Target Effects. <i>Journal of the American Chemical Society</i> , 2016, 138, 8667-8669.	6.6	35
24	Selective Recognition of RNA Substrates by ADAR Deaminase Domains. <i>Biochemistry</i> , 2018, 57, 1640-1651.	1.2	35
25	Solid-Phase Synthesis of Acridine~Peptide Conjugates and Their Analysis by Tandem Mass Spectrometry. <i>Organic Letters</i> , 2000, 2, 1465-1468.	2.4	34
26	Synthesis and Analysis of RNA Containing 6-Trifluoromethylpurine Ribonucleoside. <i>Organic Letters</i> , 2001, 3, 2969-2972.	2.4	34
27	Selective Binding by the RNA Binding Domain of PKR Revealed by Affinity Cleavage. <i>Biochemistry</i> , 2001, 40, 4272-4280.	1.2	33
28	Asymmetric dimerization of adenosine deaminase acting on RNA facilitates substrate recognition. <i>Nucleic Acids Research</i> , 2020, 48, 7958-7972.	6.5	33
29	A Fluorescent Adenosine Analogue as a Substrate for an RNA Editing Enzyme. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 8713-8716.	7.2	30
30	Controlling miRNA-like off-target effects of an siRNA with nucleobase modifications. <i>Organic and Biomolecular Chemistry</i> , 2017, 15, 10029-10036.	1.5	30
31	Click Modification of RNA at Adenosine: Structure and Reactivity of 7-Ethynyl- and 7-Triazolyl-8-aza-7-deazaadenosine in RNA. <i>ACS Chemical Biology</i> , 2014, 9, 1780-1787.	1.6	29
32	Adenosine Deaminases That Act on RNA (ADARs). <i>The Enzymes</i> , 2017, 41, 215-268.	0.7	29
33	Synthesis and evaluation of an alkyne-modified ATP analog for enzymatic incorporation into RNA. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2016, 26, 1799-1802.	1.0	28
34	A Bump-Hole Approach for Directed RNA Editing. <i>Cell Chemical Biology</i> , 2019, 26, 269-277.e5.	2.5	28
35	Matching Active Site and Substrate Structures for an RNA Editing Reaction. <i>Journal of the American Chemical Society</i> , 2009, 131, 11882-11891.	6.6	27
36	Probing RNA recognition by human ADAR2 using a high-throughput mutagenesis method. <i>Nucleic Acids Research</i> , 2016, 44, 9872-9880.	6.5	27

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37	High-Throughput Screening for Functional Adenosine to Inosine RNA Editing Systems. <i>ACS Chemical Biology</i> , 2006, 1, 761-765.	1.6	24
38	Nucleoside analog studies indicate mechanistic differences between RNA-editing adenosine deaminases. <i>Nucleic Acids Research</i> , 2012, 40, 9825-9835.	6.5	23
39	A Phenotypic Screen for Functional Mutants of Human Adenosine Deaminase Acting on RNA 1. <i>ACS Chemical Biology</i> , 2015, 10, 2512-2519.	1.6	23
40	Short Interfering RNA Guide Strand Modifiers from Computational Screening. <i>Journal of the American Chemical Society</i> , 2013, 135, 17069-17077.	6.6	22
41	Effects of Aicardi-Goutières syndrome mutations predicted from ADAR-RNA structures. <i>RNA Biology</i> , 2017, 14, 164-170.	1.5	22
42	Minor-Groove-Modulating Adenosine Replacements Control Protein Binding and RNAi Activity in siRNAs. <i>ACS Chemical Biology</i> , 2010, 5, 1115-1124.	1.6	21
43	Demethylation of 6-O-Methylinosine by an RNA-Editing Adenosine Deaminase. <i>Journal of the American Chemical Society</i> , 2000, 122, 11537-11538.	6.6	20
44	Base Modification Strategies to Modulate Immune Stimulation by an siRNA. <i>ChemBioChem</i> , 2015, 16, 262-267.	1.3	20
45	Structural basis for eukaryotic mRNA modification. <i>Current Opinion in Structural Biology</i> , 2018, 53, 59-68.	2.6	18
46	Regulation of RNA editing by intracellular acidification. <i>Nucleic Acids Research</i> , 2021, 49, 4020-4036.	6.5	18
47	RNA binding candidates for human ADAR3 from substrates of a gain of function mutant expressed in neuronal cells. <i>Nucleic Acids Research</i> , 2019, 47, 10801-10814.	6.5	17
48	Probing Adenosine-to-Inosine Editing Reactions Using RNA-Containing Nucleoside Analogs. <i>Methods in Enzymology</i> , 2007, 424, 369-386.	0.4	16
49	7-Substituted 8-aza-7-deazaadenosines for modification of the siRNA major groove. <i>Organic and Biomolecular Chemistry</i> , 2012, 10, 6491.	1.5	15
50	C6-Substituted Analogues of 8-Azanebularine: Probes of an RNA-Editing Enzyme Active Site. <i>Organic Letters</i> , 2006, 8, 3753-3756.	2.4	14
51	TLR8 activation and inhibition by guanosine analogs in RNA: Importance of functional groups and chain length. <i>Bioorganic and Medicinal Chemistry</i> , 2018, 26, 77-83.	1.4	13
52	Chemical Profiling of Adenosine RNA Editing Using a Click-Compatible Phenylacrylamide. <i>Chemistry - A European Journal</i> , 2020, 26, 9874-9878.	1.7	13
53	Rational Design of RNA Editing Guide Strands: Cytidine Analogs at the Orphan Position. <i>Journal of the American Chemical Society</i> , 2021, 143, 6865-6876.	6.6	12
54	Guide Strand 3' End Modifications Regulate siRNA Specificity. <i>ChemBioChem</i> , 2016, 17, 2340-2345.	1.3	10

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55	Versatile 3' Functionalization of CRISPR Single Guide RNA. <i>ChemBioChem</i> , 2020, 21, 1633-1640.	1.3	10
56	Site-specific modification and RNA crosslinking of the RNA-binding domain of PKR. <i>Nucleic Acids Research</i> , 2000, 28, 1899-1905.	6.5	9
57	High-throughput mutagenesis reveals unique structural features of human ADAR1. <i>Nature Communications</i> , 2020, 11, 5130.	5.8	8
58	The Chemistry and Biology of RNA editing by Adenosine Deaminases. <i>Nucleic Acids Symposium Series</i> , 2007, 51, 83-84.	0.3	7
59	Synthesis of native-like crosslinked duplex RNA and study of its properties. <i>Bioorganic and Medicinal Chemistry</i> , 2017, 25, 2191-2199.	1.4	7
60	Covalent hydration energies for purine analogs by quantum chemical methods. <i>Journal of Computational Chemistry</i> , 2010, 31, 721-725.	1.5	6
61	Covalent stabilization of a small molecule-RNA complex. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2011, 21, 5002-5005.	1.0	6
62	Nucleoside analogs in the study of the epitranscriptome. <i>Methods</i> , 2019, 156, 46-52.	1.9	6
63	Duplex RNA-Binding Enzymes: Headliners from Neurobiology, Virology, and Development. <i>ChemBioChem</i> , 2005, 6, 257-266.	1.3	4
64	Ester modification at the 3' end of anti-microRNA oligonucleotides increases potency of microRNA inhibition. <i>Bioorganic and Medicinal Chemistry</i> , 2021, 29, 115894.	1.4	3
65	Tethering in RNA: An RNA-Binding Fragment Discovery Tool. <i>Molecules</i> , 2015, 20, 4148-4161.	1.7	1
66	Oligonucleotide-directed RNA editing in primates. <i>Molecular Therapy</i> , 2022, , .	3.7	1