

Saulius Klimasauskas

List of Publications by Year in descending order

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103
papers

5,919
citations

87888

38
h-index

74163

75
g-index

113
all docs

113
docs citations

113
times ranked

4497
citing authors

#	ARTICLE	IF	CITATIONS
1	HhaI methyltransferase flips its target base out of the DNA helix. <i>Cell</i> , 1994, 76, 357-369.	28.9	988
2	The DNA (cytosine-5) methyltransferases. <i>Nucleic Acids Research</i> , 1994, 22, 1-10.	14.5	444
3	5-hmC in the brain is abundant in synaptic genes and shows differences at the exon-intron boundary. <i>Nature Structural and Molecular Biology</i> , 2012, 19, 1037-1043.	8.2	221
4	Direct transfer of extended groups from synthetic cofactors by DNA methyltransferases. <i>Nature Chemical Biology</i> , 2006, 2, 31-32.	8.0	209
5	2-Aminopurine as a fluorescent probe for DNA base flipping by methyltransferases. <i>Nucleic Acids Research</i> , 1998, 26, 1076-1083.	14.5	193
6	Processive Methylation of Hemimethylated CpG Sites by Mouse Dnmt1 DNA Methyltransferase. <i>Journal of Biological Chemistry</i> , 2005, 280, 64-72.	3.4	165
7	MHhaI binds tightly to substrates containing mismatches at the target base. <i>Nucleic Acids Research</i> , 1995, 23, 1388-1395.	14.5	162
8	Enzymatic C5-Cytosine Methylation of DNA: Mechanistic Implications of New Crystal Structures for HhaI Methyltransferase-DNA-AdoHcy Complexes. <i>Journal of Molecular Biology</i> , 1996, 261, 634-645.	4.2	162
9	Sequence motifs characteristic of DNA[cytosine-N4]methyltransferases: similarity to adenine and cytosine-C5 DNA-methylases. <i>Nucleic Acids Research</i> , 1989, 17, 9823-9832.	14.5	160
10	Cytosine-5-methyltransferases add aldehydes to DNA. <i>Nature Chemical Biology</i> , 2009, 5, 400-402.	8.0	133
11	The Mechanism of DNA Cytosine-5 Methylation. <i>Journal of Biological Chemistry</i> , 2001, 276, 20924-20934.	3.4	110
12	Targeted Labeling of DNA by Methyltransferase-Directed Transfer of Activated Groups (mTAG). <i>Journal of the American Chemical Society</i> , 2007, 129, 2758-2759.	13.7	110
13	An Adversarial DNA N6-Methyladenine-Sensor Network Preserves Polycomb Silencing. <i>Molecular Cell</i> , 2019, 74, 1138-1147.e6.	9.7	109
14	Dynamic modes of the flipped-out cytosine during HhaI methyltransferase-DNA interactions in solution. <i>EMBO Journal</i> , 1998, 17, 317-324.	7.8	108
15	A new tool for biotechnology: AdoMet-dependent methyltransferases. <i>Trends in Biotechnology</i> , 2007, 25, 99-104.	9.3	106
16	Cytosine modification in DNA by Bcn I methylase yields N 4 -methylcytosine. <i>FEBS Letters</i> , 1983, 161, 131-134.	2.8	101
17	Programmable sequence-specific click-labeling of RNA using archaeal box C/D RNP methyltransferases. <i>Nucleic Acids Research</i> , 2012, 40, 6765-6773.	14.5	90
18	DNA fluorocode: A single molecule, optical map of DNA with nanometre resolution. <i>Chemical Science</i> , 2010, 1, 453.	7.4	88

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19	A Basal Promoter Element Recognized by Free RNA Polymerase β Subunit Determines Promoter Recognition by RNA Polymerase Holoenzyme. <i>Molecular Cell</i> , 2006, 23, 97-107.	9.7	87
20	Synthesis of S-adenosyl-L-methionine analogs and their use for sequence-specific transalkylation of DNA by methyltransferases. <i>Nature Protocols</i> , 2006, 1, 1879-1886.	12.0	86
21	Time-resolved fluorescence of 2-aminopurine as a probe of base flipping in M.HhaI-DNA complexes. <i>Nucleic Acids Research</i> , 2005, 33, 6953-6960.	14.5	85
22	Purification and properties of the Eco57I restriction endonuclease and methyltransferase prototypes of a new class (type IV). <i>Nucleic Acids Research</i> , 1992, 20, 6043-6049.	14.5	75
23	Cleavage of methylated CCCGGG sequences containing either N4-methylcytosine or 5-methylcytosine with MspI, HpaII, SmaI, XmaI and Cfr9I restriction endonucleases. <i>Nucleic Acids Research</i> , 1987, 15, 7091-7102.	14.5	72
24	Investigation of restriction-modification enzymes from <i>M. varians</i> RFL19 with a new type of specificity toward modification of substrate. <i>Nucleic Acids Research</i> , 1985, 13, 5727-5748.	14.5	71
25	5-Hydroxymethylcytosine – the elusive epigenetic mark in mammalian DNA. <i>Chemical Society Reviews</i> , 2012, 41, 6916.	38.1	71
26	Functional mapping of the plant small RNA methyltransferase: HEN1 physically interacts with HYL1 and DICER-LIKE 1 proteins. <i>Nucleic Acids Research</i> , 2015, 43, 2802-2812.	14.5	67
27	Functional Roles of the Conserved Threonine 250 in the Target Recognition Domain of HhaI DNA Methyltransferase. <i>Journal of Biological Chemistry</i> , 2000, 275, 38722-38730.	3.4	66
28	Cloning and sequence analysis of the genes coding for Eco57I type IV restriction-modification enzymes. <i>Nucleic Acids Research</i> , 1992, 20, 6051-6056.	14.5	56
29	Direct Decarboxylation of 5-Carboxylcytosine by DNA C5- Methyltransferases. <i>Journal of the American Chemical Society</i> , 2014, 136, 5884-5887.	13.7	56
30	Chronic Kidney Disease and Cerebrovascular Disease. <i>Stroke</i> , 2021, 52, e328-e346.	2.0	56
31	DNA unmethylome profiling by covalent capture of CpG sites. <i>Nature Communications</i> , 2013, 4, 2190.	12.8	53
32	Enhanced Chemical Stability of AdoMet Analogues for Improved Methyltransferase-Directed Labeling of DNA. <i>ACS Chemical Biology</i> , 2013, 8, 1134-1139.	3.4	53
33	Methyltransferase-Directed Derivatization of 5-Hydroxymethylcytosine in DNA. <i>Angewandte Chemie - International Edition</i> , 2011, 50, 2090-2093.	13.8	51
34	Does Chronic Kidney Disease Predict Stroke Risk Independent of Blood Pressure?. <i>Stroke</i> , 2019, 50, 3085-3092.	2.0	45
35	Interaction of AluI, Cfr6I and PvuII restriction-modification enzymes with substrates containing either N4-methylcytosine or 5-methylcytosine. <i>Biochimica Et Biophysica Acta Gene Regulatory Mechanisms</i> , 1987, 909, 201-207.	2.4	43
36	Engineering the DNA cytosine-5 methyltransferase reaction for sequence-specific labeling of DNA. <i>Nucleic Acids Research</i> , 2012, 40, 11594-11602.	14.5	42

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37	Biosynthetic selenoproteins with genetically-encoded photocaged selenocysteines. <i>Chemical Communications</i> , 2015, 51, 8245-8248.	4.1	42
38	Allosteric control of catalysis by the F loop of RNA polymerase. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 18942-18947.	7.1	41
39	Bisulfite Sequencing Protocol Displays both 5-Methylcytosine and N4-Methylcytosine. <i>Analytical Biochemistry</i> , 1999, 271, 116-119.	2.4	39
40	Direct observation of cytosine flipping and covalent catalysis in a DNA methyltransferase. <i>Nucleic Acids Research</i> , 2011, 39, 3771-3780.	14.5	38
41	Chemical display of thymine residues flipped out by DNA methyltransferases. <i>Nucleic Acids Research</i> , 1998, 26, 3473-3479.	14.5	37
42	HhaI DNA Methyltransferase Uses the Protruding Gln237 for Active Flipping of Its Target Cytosine. <i>Structure</i> , 2004, 12, 1047-1055.	3.3	36
43	Selective Covalent Labeling of miRNA and siRNA Duplexes Using HEN1 Methyltransferase. <i>Journal of the American Chemical Society</i> , 2014, 136, 13550-13553.	13.7	36
44	Tandem virtual screening targeting the SRA domain of UHRF1 identifies a novel chemical tool modulating DNA methylation. <i>European Journal of Medicinal Chemistry</i> , 2016, 114, 390-396.	5.5	34
45	Prevention and treatment of stroke in patients with chronic kidney disease: an overview of evidence and current guidelines. <i>Kidney International</i> , 2020, 97, 266-278.	5.2	33
46	Approaches for Studying MicroRNA and Small Interfering RNA Methylation In Vitro and In Vivo. <i>Methods in Enzymology</i> , 2007, 427, 139-154.	1.0	32
47	Proteinuria as an independent predictor of stroke: Systematic review and meta-analysis. <i>International Journal of Stroke</i> , 2020, 15, 29-38.	5.9	32
48	Crystal Structure of the HhaI DNA Methyltransferase. <i>Cold Spring Harbor Symposia on Quantitative Biology</i> , 1993, 58, 331-338.	1.1	32
49	Recognition of guanosine by dissimilar tRNA methyltransferases. <i>Rna</i> , 2012, 18, 1687-1701.	3.5	29
50	International Society of Nephrology Global Kidney Health Atlas: structures, organization, and services for the management of kidney failure in Western Europe. <i>Kidney International Supplements</i> , 2021, 11, e106-e118.	14.2	29
51	Restriction endonucleases of a new type. <i>Gene</i> , 1988, 74, 89-91.	2.2	28
52	Synthesis and physical characterization of DNA fragments containing N4-methylcytosine and 5-methylcytosine. <i>Nucleic Acids Research</i> , 1987, 15, 8467-8478.	14.5	27
53	Alw26I, Eco31I and Esp3I-type IIs methyltransferases modifying cytosine and adenine in complementary strands of the target DNA. <i>Nucleic Acids Research</i> , 1992, 20, 4981-4985.	14.5	27
54	Lineage-specific variations in the trigger loop modulate RNA proofreading by bacterial RNA polymerases. <i>Nucleic Acids Research</i> , 2016, 44, 1298-1308.	14.5	26

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55	Tethered Oligonucleotide-Primed Sequencing, TOP-Seq: A High-Resolution Economical Approach for DNA Epigenome Profiling. <i>Molecular Cell</i> , 2017, 65, 554-564.e6.	9.7	26
56	Central and peripheral arterial diseases in chronic kidney disease: conclusions from a Kidney Disease: Improving Global Outcomes (KDIGO) Controversies Conference. <i>Kidney International</i> , 2021, 100, 35-48.	5.2	26
57	Kinetic and functional analysis of the small RNA methyltransferase HEN1: The catalytic domain is essential for preferential modification of duplex RNA. <i>Rna</i> , 2010, 16, 1935-1942.	3.5	25
58	Interplay between the trigger loop and the F loop during RNA polymerase catalysis. <i>Nucleic Acids Research</i> , 2014, 42, 544-552.	14.5	25
59	Repurposing enzymatic transferase reactions for targeted labeling and analysis of DNA and RNA. <i>Current Opinion in Biotechnology</i> , 2019, 55, 114-123.	6.6	22
60	Analysis of products of DNA modification by methylases: A procedure for the determination of 5- and N4-methylcytosines in DNA. <i>Analytical Biochemistry</i> , 1985, 148, 194-198.	2.4	21
61	Solubility engineering of the HhaI methyltransferase. <i>Protein Engineering, Design and Selection</i> , 2003, 16, 295-301.	2.1	21
62	A directed evolution design of a GCG-specific DNA hemimethylase. <i>Nucleic Acids Research</i> , 2009, 37, 7332-7341.	14.5	21
63	Sequence similarity among type-II restriction endonucleases, related by their recognized 6-bp target and tetranucleotide-overhang cleavage. <i>Gene</i> , 1995, 157, 311-314.	2.2	19
64	Probing a rate-limiting step by mutational perturbation of AdoMet binding in the HhaI methyltransferase. <i>Nucleic Acids Research</i> , 2005, 33, 307-315.	14.5	18
65	Animal Hen1 2'-O-methyltransferases as tools for 3'-terminal functionalization and labelling of single-stranded RNAs. <i>Nucleic Acids Research</i> , 2018, 46, e104-e104.	14.5	18
66	M.SmaI is an N4-methylcytosine specific DNA-methylase. <i>Nucleic Acids Research</i> , 1990, 18, 6607-6609.	14.5	15
67	The stereochemistry of benzo[a]pyrene-2'-deoxyguanosine adducts affects DNA methylation by SssI and HhaI DNA methyltransferases. <i>FEBS Journal</i> , 2007, 274, 2121-2134.	4.7	15
68	Oligonucleotide-Addressed Covalent 3'-Terminal Derivatization of Small RNA Strands for Enrichment and Visualization. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 6507-6510.	13.8	15
69	Precise genomic mapping of 5-hydroxymethylcytosine via covalent tether-directed sequencing. <i>PLoS Biology</i> , 2020, 18, e3000684.	5.6	15
70	Disruption of the target G-C base-pair by the HhaI methyltransferase. <i>Gene</i> , 1995, 157, 163-164.	2.2	14
71	Mechanistic insights into small RNA recognition and modification by the HEN1 methyltransferase. <i>Biochemical Journal</i> , 2013, 453, 281-290.	3.7	13
72	Characterization of restriction-modification enzymes Cfr13 I from <i>Citrobacter freundii</i> RFL13. <i>FEBS Letters</i> , 1985, 182, 509-513.	2.8	12

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73	Chemical mapping of cytosines enzymatically flipped out of the DNA helix. <i>Nucleic Acids Research</i> , 2008, 36, e57-e57.	14.5	12
74	Synthesis of <i>S</i> -adenosyl-L-methionine analogs with extended transferable groups for methyltransferase-directed labeling of DNA and RNA. <i>Current Protocols in Nucleic Acid Chemistry</i> , 2016, 64, 1.36.1-1.36.13.	0.5	12
75	Etiological Subtypes of Transient Ischemic Attack and Ischemic Stroke in Chronic Kidney Disease. <i>Stroke</i> , 2020, 51, 2786-2794.	2.0	12
76	Circular permutation of DNA cytosine-N4 methyltransferases: in vivo coexistence in the BcnI system and in vitro probing by hybrid formation. <i>Nucleic Acids Research</i> , 2002, 30, 1547-1557.	14.5	11
77	Specific Recognition of the -10 Promoter Element by the Free RNA Polymerase σ Subunit. <i>Journal of Biological Chemistry</i> , 2007, 282, 22033-22039.	3.4	11
78	A pair of single-strand and double-strand DNA cytosine-N4 methyltransferases from <i>Bacillus centrosporus</i> . <i>Biological Chemistry</i> , 1998, 379, 569-71.	2.5	10
79	Modulation of RNA polymerase activity through the trigger loop folding. <i>Transcription</i> , 2010, 1, 89-94.	3.1	9
80	Associations of Chronic Kidney Disease With Dementia Before and After TIA and Stroke. <i>Neurology</i> , 2022, 98, .	1.1	9
81	Selective chemical tracking of Dnmt1 catalytic activity in live cells. <i>Molecular Cell</i> , 2022, 82, 1053-1065.e8.	9.7	9
82	Excision of the doubly methylated base <i>N</i> ⁴ ,5-dimethylcytosine from DNA by <i>Escherichia coli</i> Nei and Fpg proteins. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2018, 373, 20170337.	4.0	8
83	<i>N</i> 4,5-dimethylcytosine, a novel hypermodified base in DNA. <i>Nucleic Acids Symposium Series</i> , 2002, 2, 73-74.	0.3	6
84	Archaeal fibrillarin-Nop5 heterodimer 2'-O-methylates RNA independently of the C/D guide RNP particle. <i>Rna</i> , 2017, 23, 1329-1337.	3.5	6
85	Impact of multimorbidity on risk and outcome of stroke: Lessons from chronic kidney disease. <i>International Journal of Stroke</i> , 2021, 16, 758-770.	5.9	6
86	Enzymatic Hydroxylation and Excision of Extended 5-Methylcytosine Analogues. <i>Journal of Molecular Biology</i> , 2020, 432, 6157-6167.	4.2	6
87	Stroke and Chronic Kidney Disease. <i>Contributions To Nephrology</i> , 2021, 199, 80-90.	1.1	6
88	DNA Labeling Using DNA Methyltransferases. <i>Advances in Experimental Medicine and Biology</i> , 2016, 945, 511-535.	1.6	5
89	Enhanced nucleosome assembly at CpG sites containing an extended 5-methylcytosine analogue. <i>Nucleic Acids Research</i> , 2022, 50, 6549-6561.	14.5	5
90	Distribution and regulatory roles of oxidized 5-methylcytosines in DNA and RNA of the basidiomycete fungi <i>Laccaria bicolor</i> and <i>Coprinopsis cinerea</i> . <i>Open Biology</i> , 2022, 12, 210302.	3.6	4

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91	Oligonucleotide-Addressed Covalent 3'-Terminal Derivatization of Small RNA Strands for Enrichment and Visualization. <i>Angewandte Chemie</i> , 2017, 129, 6607-6610.	2.0	3
92	Photocage-Selective Capture and Light-Controlled Release of Target Proteins. <i>IScience</i> , 2020, 23, 101833.	4.1	3
93	FANCD2 maintains replication fork stability during misincorporation of the DNA demethylation products 5-hydroxymethyl-2'-deoxycytidine and 5-hydroxymethyl-2'-deoxyuridine. <i>Cell Death and Disease</i> , 2022, 13, .	6.3	3
94	Affinity photo-crosslinking study of the DNA base flipping pathway by HhaI methyltransferase. <i>Nucleic Acids Symposium Series</i> , 2000, 44, 271-272.	0.3	2
95	The role of dialysis in the pathogenesis and treatment of dementia. <i>Nephrology Dialysis Transplantation</i> , 2019, 34, 1080-1083.	0.7	2
96	Usage of rRNA-methyltransferase for site-specific fluorescent labeling. <i>Moscow University Chemistry Bulletin</i> , 2012, 67, 88-93.	0.6	1
97	Editorial overview: Current advances in analytical biotechnology: from single molecules to whole organisms. <i>Current Opinion in Biotechnology</i> , 2019, 55, iii-vi.	6.6	1
98	Alleviation of C³ Mismatches in DNA by the Escherichia coli Fpg Protein. <i>Frontiers in Microbiology</i> , 2021, 12, 608839.	3.5	1
99	Methyltransferase-directed orthogonal tagging and sequencing of miRNAs and bacterial small RNAs. <i>BMC Biology</i> , 2021, 19, 129.	3.8	1
100	Contributory presentations/posters. <i>Journal of Biosciences</i> , 1999, 24, 33-198.	1.1	0
101	Phenotyping cognitive impairment in dialysis patients: insights from experimental mouse models. <i>Acta Neuropathologica</i> , 2018, 135, 157-158.	7.7	0
102	Selective immunocapture and light-controlled traceless release of transiently caged proteins. <i>STAR Protocols</i> , 2021, 2, 100455.	1.2	0
103	Biophysical Approaches To Study Dna Base Flipping. <i>NATO Science for Peace and Security Series B: Physics and Biophysics</i> , 2009, , 51-64.	0.3	0