

Paul Schimmel

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/2608942/publications.pdf>

Version: 2024-02-01

80
papers

6,475
citations

117625

34
h-index

66911

78
g-index

85
all docs

85
docs citations

85
times ranked

4810
citing authors

#	ARTICLE	IF	CITATIONS
1	A simple structural feature is a major determinant of the identity of a transfer RNA. <i>Nature</i> , 1988, 333, 140-145.	27.8	620
2	Aminoacyl tRNA Synthetases: General Scheme of Structure-Function Relationships in the Polypeptides and Recognition of Transfer RNAs. <i>Annual Review of Biochemistry</i> , 1987, 56, 125-158.	11.1	529
3	Two Distinct Cytokines Released from a Human Aminoacyl-tRNA Synthetase. <i>Science</i> , 1999, 284, 147-151.	12.6	455
4	Ribosome stalling induced by mutation of a CNS-specific tRNA causes neurodegeneration. <i>Science</i> , 2014, 345, 455-459.	12.6	378
5	Aminoacylation of RNA minihelices with alanine. <i>Nature</i> , 1989, 337, 478-481.	27.8	328
6	Essential nontranslational functions of tRNA synthetases. <i>Nature Chemical Biology</i> , 2013, 9, 145-153.	8.0	320
7	Aminoacylation error correction. <i>Nature</i> , 1996, 384, 33-34.	27.8	300
8	New functions of aminoacyl-tRNA synthetases beyond translation. <i>Nature Reviews Molecular Cell Biology</i> , 2010, 11, 668-674.	37.0	284
9	Modular arrangement of functional domains along the sequence of an aminoacyl tRNA synthetase. <i>Nature</i> , 1983, 306, 441-447.	27.8	192
10	Two Classes of tRNA Synthetases Suggested by Sterically Compatible Dockings on tRNA Acceptor Stem. <i>Cell</i> , 2001, 104, 191-193.	28.9	170
11	Aminoacyl tRNA synthetases as targets for new anti-infectives. <i>FASEB Journal</i> , 1998, 12, 1599-1609.	0.5	160
12	An aminoacyl tRNA synthetase binds to a specific DNA sequence and regulates its gene transcription. <i>Nature</i> , 1981, 291, 632-635.	27.8	156
13	Aminoacyl-tRNA synthetases: potential markers of genetic code development. <i>Trends in Biochemical Sciences</i> , 2001, 26, 591-596.	7.5	143
14	A new troponin T and cDNA clones for 13 different muscle proteins, found by shotgun sequencing. <i>Nature</i> , 1983, 302, 718-721.	27.8	139
15	Structural Switch of Lysyl-tRNA Synthetase between Translation and Transcription. <i>Molecular Cell</i> , 2013, 49, 30-42.	9.7	131
16	Functional contacts of a transfer RNA synthetase with 2'-hydroxyl groups in the RNA minor groove. <i>Nature</i> , 1992, 357, 513-515.	27.8	127
17	A human tRNA synthetase is a potent PARP1-activating effector target for resveratrol. <i>Nature</i> , 2015, 519, 370-373.	27.8	122
18	PANDORA-seq expands the repertoire of regulatory small RNAs by overcoming RNA modifications. <i>Nature Cell Biology</i> , 2021, 23, 424-436.	10.3	115

#	ARTICLE	IF	CITATIONS
19	Human tRNA synthetase catalytic nulls with diverse functions. <i>Science</i> , 2014, 345, 328-332.	12.6	101
20	Understanding structural relationships proteins of unsolved three-dimensional structure. <i>Proteins: Structure, Function and Bioinformatics</i> , 1990, 7, 99-111.	2.6	98
21	Discrete Determinants in Transfer RNA for Editing and Aminoacylation. <i>Science</i> , 1997, 276, 1250-1252.	12.6	90
22	A covalent adduct between the uracil ring and the active site of an aminoacyl tRNA synthetase. <i>Nature</i> , 1982, 298, 136-140.	27.8	86
23	The cytoplasmic prolyl-tRNA synthetase of the malaria parasite is a dual-stage target of febrifugine and its analogs. <i>Science Translational Medicine</i> , 2015, 7, 288ra77.	12.4	82
24	The selective tRNA aminoacylation mechanism based on a single G-CU pair. <i>Nature</i> , 2014, 510, 507-511.	27.8	80
25	Deficiencies in tRNA synthetase editing activity cause cardioproteinopathy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 17570-17575.	7.1	76
26	Classes of aminoacyl-tRNA synthetases and the establishment of the genetic code. <i>Trends in Biochemical Sciences</i> , 1991, 16, 1-3.	7.5	74
27	Inhibitors of aminoacyl-tRNA synthetases as novel anti-infectives. <i>Expert Opinion on Investigational Drugs</i> , 2000, 9, 1767-1775.	4.1	59
28	Atomic Determinants for Aminoacylation of RNA Minihelices and Relationship to Genetic Code. <i>Accounts of Chemical Research</i> , 1999, 32, 368-375.	15.6	50
29	Errors from Selective Disruption of the Editing Center in a tRNA Synthetase. <i>Biochemistry</i> , 2000, 39, 8180-8186.	2.5	49
30	An aminoacyl tRNA synthetase whose sequence fits into neither of the two known classes. <i>Nature</i> , 2001, 411, 110-114.	27.8	46
31	Small RNA helices as substrates for aminoacylation and their relationship to charging of transfer RNAs. <i>FEBS Journal</i> , 1992, 206, 315-321.	0.2	43
32	Double mimicry evades tRNA synthetase editing by toxic vegetable-sourced non-proteinogenic amino acid. <i>Nature Communications</i> , 2017, 8, 2281.	12.8	41
33	Alternative stable conformation capable of protein misinteraction links tRNA synthetase to peripheral neuropathy. <i>Nucleic Acids Research</i> , 2017, 45, 8091-8104.	14.5	38
34	ANKRD16 prevents neuron loss caused by an editing-defective tRNA synthetase. <i>Nature</i> , 2018, 557, 510-515.	27.8	37
35	Aminoacylation of RNA Minihelices: Implications for tRNA Synthetase Structural Design and Evolution. <i>Critical Reviews in Biochemistry and Molecular Biology</i> , 1993, 28, 309-322.	5.2	36
36	Tyrosyl-tRNA synthetase stimulates thrombopoietin-independent hematopoiesis accelerating recovery from thrombocytopenia. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, E8228-E8235.	7.1	36

#	ARTICLE	IF	CITATIONS
37	Idiographic representation of conserved domain of a class II tRNA synthetase of unknown structure. Protein Science, 1993, 2, 2259-2262.	7.6	35
38	Evolutionary Gain of Alanine Mischarging to Noncognate tRNAs with a G4:U69 Base Pair. Journal of the American Chemical Society, 2016, 138, 12948-12955.	13.7	35
39	Crystal Structure of an EMAP-II-Like Cytokine Released from a Human tRNA Synthetase. Helvetica Chimica Acta, 2003, 86, 1246-1257.	1.6	34
40	Mistranslation and its control by tRNA synthetases. Philosophical Transactions of the Royal Society B: Biological Sciences, 2011, 366, 2965-2971.	4.0	34
41	Nucleotide Determinants for tRNA-Dependent Amino Acid Discrimination by a Class I tRNA Synthetase. Biochemistry, 1999, 38, 16898-16903.	2.5	33
42	Simultaneous binding of two proteins to opposite sides of a single transfer RNA. Nature Structural Biology, 2001, 8, 344-348.	9.7	33
43	Aminoacylation of RNA oligonucleotides: minimalist structures and origin of specificity. FASEB Journal, 1993, 7, 282-289.	0.5	30
44	CMT disease severity correlates with mutation-induced open conformation of histidyl-tRNA synthetase, not aminoacylation loss, in patient cells. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 19440-19448.	7.1	28
45	Evidence that Specificity of Microhelix Charging by a Class I tRNA Synthetase Occurs in the Transition State of Catalysis. Biochemistry, 1996, 35, 608-615.	2.5	26
46	Distinct ways of G:U recognition by conserved tRNA binding motifs. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 7527-7532.	7.1	26
47	Regulation of ex-translational activities is the primary function of the multi-tRNA synthetase complex. Nucleic Acids Research, 2021, 49, 3603-3616.	14.5	25
48	Evidence for Breaking Domain~Domain Functional Communication in a Synthetase~tRNA Complex. Biochemistry, 1999, 38, 16359-16365.	2.5	24
49	Small RNA Oligonucleotide Substrates for Specific Aminoacylations. , 0, , 349-370.		24
50	RNA minihelices and the decoding of genetic information. FASEB Journal, 1991, 5, 2180-2187.	0.5	22
51	Intron locations and functional deletions in relation to the design and evolution of a subgroup of class I tRNA synthetases. Protein Science, 1992, 1, 1387-1391.	7.6	22
52	C-Terminal Zinc-Containing Peptide Required for RNA Recognition by a Class I tRNA Synthetase. Biochemistry, 1996, 35, 4139-4145.	2.5	22
53	Reconstruction of Quaternary Structures of Class II tRNA Synthetases by Rational Mutagenesis of a Conserved Domain. Biochemistry, 1997, 36, 15041-15048.	2.5	22
54	A Mechanism for Reducing Entropic Cost of Induced Fit in Protein~RNA Recognition. Biochemistry, 1996, 35, 8095-8102.	2.5	21

#	ARTICLE	IF	CITATIONS
55	Structure-Based Phylogeny of Class IIa tRNA Synthetases in Relation to an Unusual Biochemistry. <i>Journal of Molecular Evolution</i> , 2001, 53, 261-268.	1.8	20
56	Amino acid binding by the Class I aminoacyl-tRNA synthetases: Role for a conserved proline in the signature sequence. <i>Protein Science</i> , 1992, 1, 575-581.	7.6	19
57	CMT2N-causing aminoacylation domain mutants enable Nrp1 interaction with AlaRS. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	16
58	Relaxed sequence constraints favor mutational freedom in idiosyncratic metazoan mitochondrial tRNAs. <i>Nature Communications</i> , 2020, 11, 969.	12.8	15
59	Zinc-Dependent tRNA Binding by a Peptide Element within a tRNA Synthetase. <i>Biochemistry</i> , 1997, 36, 6739-6744.	2.5	13
60	tRNA Structure Goes from L to Î». <i>Cell</i> , 2003, 113, 276-278.	28.9	12
61	An alternative conformation of human TrpRS suggests a role of zinc in activating non-enzymatic function. <i>RNA Biology</i> , 2018, 15, 649-658.	3.1	12
62	X-shaped structure of bacterial heterotetrameric tRNA synthetase suggests cryptic prokaryote functions and a rationale for synthetase classifications. <i>Nucleic Acids Research</i> , 2021, 49, 10106-10119.	14.5	12
63	An Editing Activity That Prevents Mistranslation and Connection to Disease. <i>Journal of Biological Chemistry</i> , 2008, 283, 28777-28782.	3.4	9
64	p53-Dependent DNA damage response sensitive to editing-defective tRNA synthetase in zebrafish. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 8460-8465.	7.1	9
65	A metal-binding motif implicated in RNA recognition by an aminoacyl-tRNA synthetase and by a retroviral gene product. <i>Molecular Microbiology</i> , 1992, 6, 1259-1262.	2.5	8
66	Evidence for Distinct Locations for Metal Binding Sites in Two Closely Related Class I tRNA Synthetases. <i>Journal of Biomolecular Structure and Dynamics</i> , 1993, 11, 571-581.	3.5	7
67	Alanine Transfer RNA Synthetase: Structure-Function Relationships and Molecular Recognition of Transfer RNA. <i>Advances in Enzymology and Related Areas of Molecular Biology</i> , 2006, 63, 233-270.	1.3	6
68	Alternative splicing creates two new architectures for human tyrosyl-tRNA synthetase. <i>Nucleic Acids Research</i> , 2016, 44, 1247-1255.	14.5	6
69	Construction of Intra-Domain Chimeras of Aminoacyl-tRNA Synthetases. <i>Journal of Biomolecular Structure and Dynamics</i> , 1989, 7, 225-234.	3.5	5
70	'Distorted' RNA helix recognition. <i>Nature</i> , 1996, 384, 422-422.	27.8	5
71	Synthesis of Two Polypeptide Subunits of an Aminoacyl tRNA Synthetase as a Single Polypeptide Chain. <i>Journal of Biomolecular Structure and Dynamics</i> , 1983, 1, 225-229.	3.5	2
72	Translation Silenced by Fused Pair of tRNA Synthetases. <i>Cell</i> , 2004, 119, 147-148.	28.9	2

#	ARTICLE	IF	CITATIONS
73	Industry benefits from the public funding of intellectual curiosity. Nature, 2000, 406, 826-826.	27.8	1
74	Public Funding of Intellectual Curiosity. IUBMB Life, 2000, 50, 345-346.	3.4	1
75	RNA Scaffolds for Minihelix-Based Aminoacyl Transfer: Design of "Transpeptizymes". Journal of Biomolecular Structure and Dynamics, 2000, 17, 29-37.	3.5	1
76	The endless frontier of tRNA synthetases. The Enzymes, 2020, 48, 1-10.	1.7	1
77	Evolution and Future of Biotechnology. ACS Symposium Series, 1988, , 30-35.	0.5	1
78	Sca-1 As a Marker of Stress-Induced Thrombopoiesis in Mice. Blood, 2019, 134, 1068-1068.	1.4	1
79	Introducing New Amino Acids into Proteins. Scientific World Journal, The, 2002, 2, 47-48.	2.1	0
80	Extracellular Tyrosyl-tRNA Synthetase Is a Potent Stimulator of Thrombocytopoiesis. Blood, 2016, 128, 1476-1476.	1.4	0