Oscar Vargas-Rodriguez

List of Publications by Year
in descending order

23 papers	585 citations	566801 15 h-index	642321 23 g-index
26 all docs	26 docs citations	26 times ranked	690 citing authors

#	Article	IF	Citations
1	The tRNA discriminator base defines the mutual orthogonality of two distinct pyrrolysyl-tRNA synthetase/tRNAPyl pairs in the same organism. Nucleic Acids Research, 2022, 50, 4601-4615.	6.5	7
2	Genetic Encoding of Three Distinct Noncanonical Amino Acids Using Reprogrammed Initiator and Nonsense Codons. ACS Chemical Biology, 2021, 16, 766-774.	1.6	39
3	Bacterial translation machinery for deliberate mistranslation of the genetic code. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	9
4	Human trans-editing enzyme displays tRNA acceptor-stem specificity and relaxed amino acid selectivity. Journal of Biological Chemistry, 2020, 295, 16180-16190.	1.6	8
5	A cysteinyl-tRNA synthetase variant confers resistance against selenite toxicity and decreases selenocysteine misincorporation. Journal of Biological Chemistry, 2019, 294, 12855-12865.	1.6	18
6	Plasticity and Constraints of tRNA Aminoacylation Define Directed Evolution of Aminoacyl-tRNA Synthetases. International Journal of Molecular Sciences, 2019, 20, 2294.	1.8	15
7	Mechanistic insights into the slow peptide bond formation with D-amino acids in the ribosomal active site. Nucleic Acids Research, 2019, 47, 2089-2100.	6.5	36
8	Engineered Aminoacyl-tRNA Synthetases with Improved Selectivity toward Noncanonical Amino Acids. ACS Chemical Biology, 2019, 14, 603-612.	1.6	23
9	Engineering posttranslational proofreading to discriminate nonstandard amino acids. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 619-624.	3.3	37
10	Upgrading aminoacyl-tRNA synthetases for genetic code expansion. Current Opinion in Chemical Biology, 2018, 46, 115-122.	2.8	94
11	Effects of Heterologous tRNA Modifications on the Production of Proteins Containing Noncanonical Amino Acids. Bioengineering, 2018, 5, 11.	1.6	10
12	Recoding of the selenocysteine UGA codon by cysteine in the presence of a non-canonical tRNA^{Cys}and elongation factor SelB. RNA Biology, 2018, 15, 471-479.	1.5	8
13	Transfer RNAs with novel cloverleaf structures. Nucleic Acids Research, 2017, 45, gkw898.	6.5	26
14	A genomically modified Escherichia coli strain carrying an orthogonal E. coli histidyl-tRNA synthetaseâ€¢tRNA His pair. Biochimica Et Biophysica Acta - General Subjects, 2017, 1861, 3009-3015.	1.1	8
15	The central role of tRNA in genetic code expansion. Biochimica Et Biophysica Acta - General Subjects, 2017, 1861, 3001-3008.	1.1	27
16	Conformational and chemical selection by a trans -acting editing domain. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E6774-E6783.	3.3	19
17	Double mimicry evades tRNA synthetase editing by toxic vegetable-sourced non-proteinogenic amino acid. Nature Communications, 2017, 8, 2281.	5.8	41
18	Emergent rules for codon choice elucidated by editing rare arginine codons in Escherichia coli. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E5588-97.	3.3	48

#	Article	IF	Citations
19	Ancestral AlaX Editing Enzymes for Control of Genetic Code Fidelity Are Not tRNA-specific. Journal of Biological Chemistry, 2015, 290, 10495-10503.	1.6	16
20	Homologous trans -editing factors with broad tRNA specificity prevent mistranslation caused by serine/threonine misactivation. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 6027-6032.	3.3	28
21	Distinct tRNA recognition strategies used by a homologous family of editing domains prevent mistranslation. Nucleic Acids Research, 2014, 42, 3943-3953.	6.5	27
22	Wobble puts RNA on target. Nature, 2014, 510, 480-481.	13.7	5
23	Exclusive Use of trans-Editing Domains Prevents Proline Mistranslation. Journal of Biological Chemistry, 2013, 288, 14391-14399.	1.6	35