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	Upgrading aminoacyl-tRNA synthetases for genetic code expansion. Current Opinion in Chemical Biology, 2018, 46, 115-122.	2.8	94
2	Emergent rules for codon choice elucidated by editing rare arginine codons in <i>Escherichia coli</i>. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E5588-97.	3.3	48
3	Double mimicry evades tRNA synthetase editing by toxic vegetable-sourced non-proteinogenic amino acid. Nature Communications, 2017, 8, 2281.	5.8	41
4	Genetic Encoding of Three Distinct Noncanonical Amino Acids Using Reprogrammed Initiator and Nonsense Codons. ACS Chemical Biology, 2021, 16, 766-774.	1.6	39
5	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
6	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
7	Exclusive Use of trans-Editing Domains Prevents Proline Mistranslation. Journal of Biological Chemistry, 2013, 288, 14391-14399.	1.6	35
8	Homologous <i>trans</i> -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
9	Distinct tRNA recognition strategies used by a homologous family of editing domains prevent mistranslation. Nucleic Acids Research, 2014, 42, 3943-3953.	6.5	27
10	The central role of tRNA in genetic code expansion. Biochimica Et Biophysica Acta - General Subjects, 2017, 1861, 3001-3008.	1.1	27
11	Transfer RNAs with novel cloverleaf structures. Nucleic Acids Research, 2017, 45, gkw898.	6.5	26
12	Engineered Aminoacyl-tRNA Synthetases with Improved Selectivity toward Noncanonical Amino Acids. ACS Chemical Biology, 2019, 14, 603-612.	1.6	23
13	Conformational and chemical selection by a <i>trans</i> -acting editing domain. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E6774-E6783.	3.3	19
14	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
15	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
16	Plasticity and Constraints of tRNA Aminoacylation Define Directed Evolution of Aminoacyl-tRNA Synthetases. International Journal of Molecular Sciences, 2019, 20, 2294.	1.8	15
17	Effects of Heterologous tRNA Modifications on the Production of Proteins Containing Noncanonical Amino Acids. Bioengineering, 2018, 5, 11.	1.6	10
18	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

#	Article	IF	Citations
19	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
20	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
21	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
22	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
23	Wobble puts RNA on target. Nature, 2014, 510, 480-481.	13.7	5