

Roberto Contestabile

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

70
papers

1,780
citations

25
h-index

39
g-index

83
ext. papers

2,099
ext. citations

4.7
avg. IF

4.45
L-index

#	Paper	IF	Citations
70	Pyridoxal 5Pphosphate enzymes as targets for therapeutic agents. <i>Current Medicinal Chemistry</i> , 2007 , 14, 1291-324	4.3	153
69	Vitamin B(6) salvage enzymes: mechanism, structure and regulation. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2011 , 1814, 1597-608	4	141
68	Crystal structure of glutamate-1-semialdehyde aminomutase: an alpha2-dimeric vitamin B6-dependent enzyme with asymmetry in structure and active site reactivity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1997 , 94, 4866-71	11.5	132
67	l-Threonine aldolase, serine hydroxymethyltransferase and fungal alanine racemase. A subgroup of strictly related enzymes specialized for different functions. <i>FEBS Journal</i> , 2001 , 268, 6508-25		75
66	Molecular mechanisms of the non-coenzyme action of thiamin in brain: biochemical, structural and pathway analysis. <i>Scientific Reports</i> , 2015 , 5, 12583	4.9	72
65	SHMT1 knockdown induces apoptosis in lung cancer cells by causing uracil misincorporation. <i>Cell Death and Disease</i> , 2014 , 5, e1525	9.8	61
64	How pyridoxal 5Pphosphate differentially regulates human cytosolic and mitochondrial serine hydroxymethyltransferase oligomeric state. <i>FEBS Journal</i> , 2015 , 282, 1225-41	5.7	51
63	Mutation of tyrosine 332 to phenylalanine converts dopa decarboxylase into a decarboxylation-dependent oxidative deaminase. <i>Journal of Biological Chemistry</i> , 2002 , 277, 36357-62	5.4	51
62	Glycine consumption and mitochondrial serine hydroxymethyltransferase in cancer cells: the heme connection. <i>Medical Hypotheses</i> , 2013 , 80, 633-6	3.8	50
61	Serine hydroxymethyltransferase: a model enzyme for mechanistic, structural, and evolutionary studies. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2011 , 1814, 1489-96	4	48
60	Coupling bioorthogonal chemistries with artificial metabolism: intracellular biosynthesis of azidohomoalanine and its incorporation into recombinant proteins. <i>Molecules</i> , 2014 , 19, 1004-22	4.8	46
59	In silico and in vitro validation of serine hydroxymethyltransferase as a chemotherapeutic target of the antifolate drug pemetrexed. <i>European Journal of Medicinal Chemistry</i> , 2011 , 46, 1616-21	6.8	45
58	On the catalytic mechanism and stereospecificity of Escherichia coli L-threonine aldolase. <i>FEBS Journal</i> , 2014 , 281, 129-45	5.7	42
57	Biomedical aspects of pyridoxal 5Pphosphate availability. <i>Frontiers in Bioscience - Scholar</i> , 2012 , 4, 897-913	13.4	39
56	Alanine racemase from Tolypocladium inflatum: a key PLP-dependent enzyme in cyclosporin biosynthesis and a model of catalytic promiscuity. <i>Archives of Biochemistry and Biophysics</i> , 2013 , 529, 55-65	4.1	34
55	Pyridoxal 5Pphosphate is a slow tight binding inhibitor of E. coli pyridoxal kinase. <i>PLoS ONE</i> , 2012 , 7, e41680	3.7	33
54	Molecular basis of reduced pyridoxine 5Pphosphate oxidase catalytic activity in neonatal epileptic encephalopathy disorder. <i>Journal of Biological Chemistry</i> , 2009 , 284, 30949-56	5.4	32

53	A pyrazolopyran derivative preferentially inhibits the activity of human cytosolic serine hydroxymethyltransferase and induces cell death in lung cancer cells. <i>Oncotarget</i> , 2016 , 7, 4570-83	3.3	32
52	Threonine aldolase and alanine racemase: novel examples of convergent evolution in the superfamily of vitamin B6-dependent enzymes. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2003 , 1647, 214-9	4	30
51	Role of a conserved active site cation-pi interaction in Escherichia coli serine hydroxymethyltransferase. <i>Biochemistry</i> , 2009 , 48, 12034-46	3.2	29
50	Differential 3-bromopyruvate inhibition of cytosolic and mitochondrial human serine hydroxymethyltransferase isoforms, key enzymes in cancer metabolic reprogramming. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2016 , 1864, 1506-17	4	28
49	Molecular mechanism of PdxR β transcriptional activator involved in the regulation of vitamin B6 biosynthesis in the probiotic bacterium Bacillus clausii. <i>FEBS Journal</i> , 2015 , 282, 2966-84	5.7	26
48	Screening and in vitro testing of antifolate inhibitors of human cytosolic serine hydroxymethyltransferase. <i>ChemMedChem</i> , 2015 , 10, 490-7	3.7	25
47	Catalytic and thermodynamic properties of tetrahydromethanopterin-dependent serine hydroxymethyltransferase from Methanococcus jannaschii. <i>Journal of Biological Chemistry</i> , 2003 , 278, 41789-97	5.4	25
46	Role of tyrosine 65 in the mechanism of serine hydroxymethyltransferase. <i>Biochemistry</i> , 2000 , 39, 7492-500	5.0	25
45	The mechanism of addition of pyridoxal 5Pphosphate to Escherichia coli apo-serine hydroxymethyltransferase. <i>Biochemical Journal</i> , 2007 , 404, 477-85	3.8	24
44	Enzymatic synthesis of β -carboxy- γ -hydroxy-(l)- α -amino acids. <i>Tetrahedron</i> , 2008 , 64, 5079-5084	2.4	23
43	Crystal structures of human pyridoxal kinase in complex with the neurotoxins, ginkgotoxin and theophylline: insights into pyridoxal kinase inhibition. <i>PLoS ONE</i> , 2012 , 7, e40954	3.7	22
42	The contribution of a conformationally mobile, active site loop to the reaction catalyzed by glutamate semialdehyde aminomutase. <i>Journal of Biological Chemistry</i> , 2000 , 275, 3879-86	5.4	22
41	On the mechanism of Escherichia coli pyridoxal kinase inhibition by pyridoxal and pyridoxal 5Pphosphate. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2015 , 1854, 1160-6	4	17
40	Pyridoxine-5Pphosphate oxidase (Pnpo) deficiency: Clinical and biochemical alterations associated with the C.347g>A (P. \square Arg116gln) mutation. <i>Molecular Genetics and Metabolism</i> , 2017 , 122, 135-142	3.7	17
39	Biomedical aspects of pyridoxal 5 -phosphate availability. <i>Frontiers in Bioscience - Elite</i> , 2012 , E4, 897-913	3.6	17
38	The MocR-like transcription factors: pyridoxal 5Pphosphate-dependent regulators of bacterial metabolism. <i>FEBS Journal</i> , 2018 , 285, 3925-3944	5.7	16
37	The aspartate aminotransferase-like domain of Firmicutes MocR transcriptional regulators. <i>Computational Biology and Chemistry</i> , 2015 , 58, 55-61	3.6	15
36	Human Cytosolic and Mitochondrial Serine Hydroxymethyltransferase Isoforms in Comparison: Full Kinetic Characterization and Substrate Inhibition Properties. <i>Biochemistry</i> , 2018 , 57, 6984-6996	3.2	15

35	Structure-based mechanism for early PLP-mediated steps of rabbit cytosolic serine hydroxymethyltransferase reaction. <i>BioMed Research International</i> , 2013 , 2013, 458571	3	14
34	The role of evolutionarily conserved hydrophobic contacts in the quaternary structure stability of <i>Escherichia coli</i> serine hydroxymethyltransferase. <i>FEBS Journal</i> , 2009 , 276, 132-43	5.7	14
33	The moonlighting RNA-binding activity of cytosolic serine hydroxymethyltransferase contributes to control compartmentalization of serine metabolism. <i>Nucleic Acids Research</i> , 2019 , 47, 4240-4254	20.1	12
32	Study of DNA binding and bending by <i>Bacillus subtilis</i> GabR, a PLP-dependent transcription factor. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2017 , 1861, 3474-3489	4	12
31	Asymmetry of the active site loop conformation between subunits of glutamate-1-semialdehyde aminomutase in solution. <i>BioMed Research International</i> , 2013 , 2013, 353270	3	12
30	Reactions of glutamate 1-semialdehyde aminomutase with R- and S-enantiomers of a novel, mechanism-based inhibitor, 2,3-diaminopropyl sulfate. <i>Biochemistry</i> , 2000 , 39, 3091-6	3.2	12
29	<i>Salmonella typhimurium</i> PtsJ is a novel MocR-like transcriptional repressor involved in regulating the vitamin B salvage pathway. <i>FEBS Journal</i> , 2017 , 284, 466-484	5.7	11
28	The catalytic activity of serine hydroxymethyltransferase is essential for de novo nuclear dTMP synthesis in lung cancer cells. <i>FEBS Journal</i> , 2018 , 285, 3238-3253	5.7	11
27	The crystal structure of archaeal serine hydroxymethyltransferase reveals idiosyncratic features likely required to withstand high temperatures. <i>Proteins: Structure, Function and Bioinformatics</i> , 2014 , 82, 3437-49	4.2	11
26	Biochemical data from the characterization of a new pathogenic mutation of human pyridoxine-5P-phosphate oxidase (PNPO). <i>Data in Brief</i> , 2017 , 15, 868-875	1.2	9
25	Reactions of glutamate semialdehyde aminotransferase (glutamate-1-semialdehyde 2,1 aminomutase) with vinyl and acetylenic substrate analogues analysed by rapid scanning spectrophotometry. <i>Biochemical Journal</i> , 1995 , 309 (Pt 1), 307-13	3.8	9
24	A Bioinformatics Analysis Reveals a Group of MocR Bacterial Transcriptional Regulators Linked to a Family of Genes Coding for Membrane Proteins. <i>Biochemistry Research International</i> , 2016 , 2016, 43602854	2.4	9
23	Structural properties of the linkers connecting the N- and C- terminal domains in the MocR bacterial transcriptional regulators. <i>Biochimie Open</i> , 2016 , 3, 8-18	0	9
22	Inhibition of human pyridoxal kinase by 2-acetyl-4-((1R,2S,3R)-1,2,3,4-tetrahydroxybutyl)imidazole (THI). <i>Journal of Enzyme Inhibition and Medicinal Chemistry</i> , 2015 , 30, 336-40	5.6	8
21	Pyridoxal 5?-Phosphate-Dependent Enzymes: Catalysis, Conformation, and Genomics 2010 , 273-350		8
20	Isolation of a Complex Formed Between HemA and HemL, Key Enzymes of Tetrapyrroles Biosynthesis. <i>Frontiers in Molecular Biosciences</i> , 2019 , 6, 6	5.6	7
19	Differential inhibitory effect of a pyrazolopyran compound on human serine hydroxymethyltransferase-amino acid complexes. <i>Archives of Biochemistry and Biophysics</i> , 2018 , 653, 71-79	4.1	7
18	The structure of serine hydroxymethyltransferase as modeled by homology and validated by site-directed mutagenesis. <i>Protein Science</i> , 1998 , 7, 1976-82	6.3	7

17	An Engineered Escherichia coli Strain with Synthetic Metabolism for in-Cell Production of Translationally Active Methionine Derivatives. <i>ChemBioChem</i> , 2020 , 21, 3525-3538	3.8	7
16	Data from computational analysis of the peptide linkers in the MocR bacterial transcriptional regulators. <i>Data in Brief</i> , 2016 , 9, 292-313	1.2	7
15	The multifaceted role of vitamin B in cancer: as a model system to investigate DNA damage. <i>Open Biology</i> , 2020 , 10, 200034	7	6
14	Stereochemistry of the reactions of glutamate-1-semialdehyde aminomutase with 4,5-diaminovalerate. <i>Journal of Biological Chemistry</i> , 2003 , 278, 40521-6	5.4	6
13	Allosteric feedback inhibition of pyridoxine 5Pphosphate oxidase from. <i>Journal of Biological Chemistry</i> , 2019 , 294, 15593-15603	5.4	5
12	The expression of four pyridoxal kinase (PDXK) human variants in Drosophila impacts on genome integrity. <i>Scientific Reports</i> , 2019 , 9, 14188	4.9	5
11	The mechanism of high-yielding chiral syntheses catalysed by wild-type and mutant forms of aspartate aminotransferase. <i>FEBS Journal</i> , 1996 , 240, 150-5		5
10	Interaction of Bacillus subtilis GabR with the gabTD promoter: role of repeated sequences and effect of GABA in transcriptional activation. <i>FEBS Journal</i> , 2020 , 287, 4952-4970	5.7	4
9	Molecular basis of E. coli L-threonine aldolase catalytic inactivation at low pH. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2015 , 1854, 278-83	4	4
8	Structural stability of the cofactor binding site in Escherichia coli serine hydroxymethyltransferase--the role of evolutionarily conserved hydrophobic contacts. <i>FEBS Journal</i> , 2009 , 276, 7319-28	5.7	3
7	Molecular characterization of pyridoxine 5Pphosphate oxidase and its pathogenic forms associated with neonatal epileptic encephalopathy. <i>Scientific Reports</i> , 2020 , 10, 13621	4.9	3
6	Structural basis of methotrexate and pemetrexed action on serine hydroxymethyltransferases revealed using plant models. <i>Scientific Reports</i> , 2019 , 9, 19614	4.9	3
5	A Comprehensive Computational Analysis of Mycobacterium Genomes Pinpoints the Genes Co-occurring with YczE, a Membrane Protein Coding Gene Under the Putative Control of a MocR, and Predicts its Function. <i>Interdisciplinary Sciences, Computational Life Sciences</i> , 2018 , 10, 111-125	3.5	3
4	Structural and kinetic properties of serine hydroxymethyltransferase from the halophytic cyanobacterium Aphanothece halophytica provide a rationale for salt tolerance. <i>International Journal of Biological Macromolecules</i> , 2020 , 159, 517-529	7.9	2
3	Structural stability of cold-adapted serine hydroxymethyltransferase, a tool for hydroxy-amino acid biosynthesis. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2014 , 110, 171-177		1
2	Identification and characterization of the pyridoxal 5Pphosphate allosteric site in Escherichia coli pyridoxine 5Pphosphate oxidase. <i>Journal of Biological Chemistry</i> , 2021 , 296, 100795	5.4	0
1	Serine hydroxymethyltransferase: role of the active site lysine in the mechanism of the enzyme. <i>Advances in Experimental Medicine and Biology</i> , 1993 , 338, 715-8	3.6	