Brian G Miller

List of Publications by Citations

39 papers	1,029 citations	19 h-index	32 g-index
39 ext. papers	1,148 ext. citations	5.8 avg, IF	4.6 L-index

#	Paper	IF	Citations
39	Catalytic proficiency: the unusual case of OMP decarboxylase. *Annual Review of Biochemistry*, **2002**, 71, 847-85	29.1	231
38	Identifying latent enzyme activities: substrate ambiguity within modern bacterial sugar kinases. *Biochemistry*, **2004**, 43, 6387-92	3.2	76
37	Cooperativity in monomeric enzymes with single ligand-binding sites. *Bioorganic Chemistry*, **2012**, 43, 44-50	5.1	72
36	Dissecting a charged network at the active site of orotidine-5]-phosphate decarboxylase. *Journal of Biological Chemistry*, **2001**, 276, 15174-6	5.4	44
35	Order-disorder transitions govern kinetic cooperativity and allostery of monomeric human glucokinase. *PLoS Biology*, **2012**, 10, e1001452	9.7	43
34	Reconstitution of a defunct glycolytic pathway via recruitment of ambiguous sugar kinases. *Biochemistry*, **2005**, 44, 10776-83	3.2	41
33	Enantioselective synthesis of tatanans A-C and reinvestigation of their glucokinase-activating properties. *Nature Chemistry*, **2013**, 5, 410-6	17.6	39
32	Molecular and cellular regulation of human glucokinase. *Archives of Biochemistry and Biophysics*, **2019**, 663, 199-213	4.1	39
31	Structural basis for regulation of human glucokinase by glucokinase regulatory protein. *Biochemistry*, **2013**, 52, 6232-9	3.2	36
30	Dual allosteric activation mechanisms in monomeric human glucokinase. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 11553-8	11.5	34
29	Homotropic allosteric regulation in monomeric mammalian glucokinase. *Archives of Biochemistry and Biophysics*, **2012**, 519, 103-11	4.1	33
28	Evolutionary bases of carbohydrate recognition and substrate discrimination in the ROK protein family. *Journal of Molecular Evolution*, **2010**, 70, 545-56	3.1	33
27	OMP decarboxylase--An enigma persists. *Bioorganic Chemistry*, **2007**, 35, 465-9	5.1	27
26	Direct evidence of conformational heterogeneity in human pancreatic glucokinase from high-resolution nuclear magnetic resonance. *Biochemistry*, **2010**, 49, 7969-71	3.2	26
25	Kinetic Cooperativity in Human Pancreatic Glucokinase Originates from Millisecond Dynamics of the Small Domain. *Angewandte Chemie - International Edition*, **2015**, 54, 8129-32	16.4	25
24	Divergent evolution of function in the ROK sugar kinase superfamily: role of enzyme loops in substrate specificity. *Biochemistry*, **2007**, 46, 13564-72	3.2	24
23	Global fit analysis of glucose binding curves reveals a minimal model for kinetic cooperativity in human glucokinase. *Biochemistry*, **2010**, 49, 8902-11	3.2	22

22	Activating mutations in the human glucokinase gene revealed by genetic selection. *Biochemistry*, **2009**, 48, 814-6	3.2	22
21	23-Residue C-terminal alpha-helix governs kinetic cooperativity in monomeric human glucokinase. *Biochemistry*, **2009**, 48, 6157-65	3.2	21
20	Short Total Synthesis of [N]-Cylindrospermopsins from NHCl Enables Precise Quantification of Freshwater Cyanobacterial Contamination. *Journal of the American Chemical Society*, **2018**, 140, 6027-6032	16.4	19
19	A metabolic bypass of the triosephosphate isomerase reaction. *Biochemistry*, **2008**, 47, 7983-5	3.2	19
18	Small-Molecule Allosteric Activation of Human Glucokinase in the Absence of Glucose. *ACS Medicinal Chemistry Letters*, **2013**, 4,	4.3	18
17	Biliverdin Reductase B Dynamics Are Coupled to Coenzyme Binding. *Journal of Molecular Biology*, **2018**, 430, 3234-3250	6.5	13
16	Conformational heterogeneity and intrinsic disorder in enzyme regulation: Glucokinase as a case study. *Intrinsically Disordered Proteins*, **2015**, 3, e1011008		10
15	Mechanistic Origins of Enzyme Activation in Human Glucokinase Variants Associated with Congenital Hyperinsulinism. *Biochemistry*, **2018**, 57, 1632-1639	3.2	9
14	Role of connecting loop I in catalysis and allosteric regulation of human glucokinase. *Protein Science* , **2014**, 23, 915-22	6.3	8
13	The mutability of enzyme active-site shape determinants. *Protein Science*, **2007**, 16, 1965-8	6.3	7
12	Analysis of Interactions Stabilized by Fusicoccin A Reveals an Expanded Suite of Potential 14-3-3 Binding Partners. *ACS Chemical Biology*, **2020**, 15, 305-310	4.9	6
11	Kinetic Cooperativity in Human Pancreatic Glucokinase Originates from Millisecond Dynamics of the Small Domain. *Angewandte Chemie*, **2015**, 127, 8247-8250	3.6	6
10	Antidiabetic Disruptors of the Glucokinase-Glucokinase Regulatory Protein Complex Reorganize a Coulombic Interface. *Biochemistry*, **2017**, 56, 3150-3157	3.2	5
9	Selenolysine: A New Tool for Traceless Isopeptide Bond Formation. *Chemistry - A European Journal*, **2020**, 26, 4952-4957	4.8	5
8	Biochemical and biophysical investigations of the interaction between human glucokinase and pro-apoptotic BAD. *PLoS ONE*, **2017**, 12, e0171587	3.7	4
7	Probing the 14-3-3 Isoform-Specificity Profile of Protein-Protein Interactions Stabilized by Fusicoccin A. *ACS Omega*, **2020**, 5, 25029-25035	3.9	4
6	Kinetic Basis of Carbohydrate-Mediated Inhibition of Human Glucokinase by the Glucokinase Regulatory Protein. *Biochemistry*, **2016**, 55, 2899-902	3.2	4
5	Nanosecond-Timescale Dynamics and Conformational Heterogeneity in Human GCK Regulation and Disease. *Biophysical Journal*, **2020**, 118, 1109-1118	2.9	2

4	L-glyceraldehyde 3-phosphate reductase from Escherichia coli is a heme binding protein. *Bioorganic Chemistry*, **2010**, 38, 37-41	5.1	1
3	Vertical Investigations of Enzyme Evolution Using Ancestral Sequence Reconstruction **2020**, 640-653		1
2	Assessing and Exploiting the Persistence of Substrate Ambiguity in Modern Protein Catalysts **2011**, 343-362		
1	Enzyme recruitment and the evolution of new metabolic potential. *FASEB Journal*, **2013**, 27, 203.2	0.9	