Miguel A Ballicora

List of Publications by Year
in descending order

76 papers	2,575 citations	24 h-index (257450)	49 g-index (197818)
80 all docs	80 docs citations	80 times ranked	1600 citing authors

#	Article	IF	Citations
1	ADP-Glucose Pyrophosphorylase: A Regulatory Enzyme for Plant Starch Synthesis. Photosynthesis Research, 2004, 79, 1-24.	2.9	279
2	ADP-Glucose Pyrophosphorylase, a Regulatory Enzyme for Bacterial Glycogen Synthesis. Microbiology and Molecular Biology Reviews, 2003, 67, 213-225.	6.6	242
3	Activation of the Potato Tuber ADP-glucose Pyrophosphorylase by Thioredoxin. Journal of Biological Chemistry, 2000, 275, 1315-1320.	3.4	168
4	Adenosine 5[prime]-Diphosphate-Glucose Pyrophosphorylase from Potato Tuber (Significance of the N) Tj ETQq0 0 0 rgBT /Overlock 10 245-251.	4.8	146
5	Crystal structure of potato tuber ADP-glucose pyrophosphorylase. EMBO Journal, 2005, 24, 694-704.	7.8	143
6	Mechanism of Reductive Activation of Potato Tuber ADP-glucose Pyrophosphorylase. Journal of Biological Chemistry, 1998, 273, 25045-25052.	3.4	139
7	The Different Large Subunit Isoforms of Arabidopsis thaliana ADP-glucose Pyrophosphorylase Confer Distinct Kinetic and Regulatory Properties to the Heterotetrameric Enzyme. Journal of Biological Chemistry, 2003, 278, 28508-28515.	3.4	130
8	Two Arabidopsis ADP-Glucose Pyrophosphorylase Large Subunits (APL1 and APL2) Are Catalytic. Plant Physiology, 2008, 148, 65-76.	4.8	79
9	ADP-Glucose Pyrophosphorylase from Potato Tubers. Site-Directed Mutagenesis Studies of the Regulatory Sites1. Plant Physiology, 1998, 118, 265-274.	4.8	77
10	The reductive pentose phosphate cycle for photosynthetic CO ₂ assimilation: enzyme modulation. FASEB Journal, 1993, 7, 622-637.	0.5	76
11	Resurrecting the Ancestral Enzymatic Role of a Modulatory Subunit. Journal of Biological Chemistry, 2005, 280, 10189-10195.	3.4	67
12	Characterization of the branching patterns of glycogen branching enzyme truncated on the N-terminus. Archives of Biochemistry and Biophysics, 2003, 418, 34-38.	3.0	60
13	Mutagenesis of the Glucose-1-Phosphate-Binding Site of Potato Tuber ADP-Glucose Pyrophosphorylase1. Plant Physiology, 1998, 117, 989-996.	4.8	51
14	Aspartate Residue 142 Is Important for Catalysis by ADP-glucose Pyrophosphorylase from Escherichia coli. Journal of Biological Chemistry, 2001, 276, 46319-46325.	3.4	50
15	Identification of Regions Critically Affecting Kinetics and Allosteric Regulation of the Escherichia coli ADP-Glucose Pyrophosphorylase by Modeling and Pentapeptide-Scanning Mutagenesis. Journal of Bacteriology, 2007, 189, 5325-5333.	2.2	43
16	ADP-glucose pyrophosphorylase from potato tuber: site-directed mutagenesis of homologous aspartic acid residues in the small and large subunits. Plant Journal, 2003, 33, 503-511.	5.7	42
17	Characterization of Chimeric ADPglucose Pyrophosphorylases ofEscherichia coliandAgrobacterium tumefaciens. Importance of the C-Terminus on the Selectivity for Allosteric Regulatorsâ€. Biochemistry, 2002, 41, 9431-9437.	2.5	39
18	Heat Stability of the Potato Tuber ADP-Glucose Pyrophosphorylase: Role of Cys Residue 12 in the Small Subunit. Biochemical and Biophysical Research Communications, 1999, 257, 782-786.	2.1	33

#	Article	IF	Citations
19	Understanding the allosteric trigger for the fructose-1,6-bisphosphate regulation of the ADP-glucose pyrophosphorylase from Escherichia coli. Biochimie, 2011, 93, 1816-1823.	2.6	31
20	Ostreococcus tauri ADP-glucose Pyrophosphorylase Reveals Alternative Paths for the Evolution of Subunit Roles. Journal of Biological Chemistry, 2009, 284, 34092-34102.	3.4	30
21	Identification and Characterization of a Critical Region in the Glycogen Synthase from Escherichia coli. Journal of Biological Chemistry, 2004, 279, 8359-8367.	3.4	27
22	The active site of the Escherichia coli glycogen synthase is similar to the active site of retaining GT-B glycosyltransferases. Biochemical and Biophysical Research Communications, 2004, 316, 960-966.	2.1	27
23	An assay for adenosine 5â€²-diphosphate (ADP)-glucose pyrophosphorylase that measures the synthesis of radioactive ADP-glucose with glycogen synthase. Analytical Biochemistry, 2004, 324, 52-59.	2.4	26
24	Molecular Architecture of the Glucose 1-Phosphate Site in ADP-glucose Pyrophosphorylases. Journal of Biological Chemistry, 2006, 281, 40473-40484.	3.4	26
25	The ADP-glucose pyrophosphorylase fromEscherichia colicomprises two tightly bound distinct domains. FEBS Letters, 2004, 573, 99-104.	2.8	25
26	The unique nucleotide specificity of the sucrose synthase from <i>Thermosynechococcus elongatus</i>. FEBS Letters, 2013, 587, 165-169.	2.8	24
27	A Novel Polyamine Allosteric Site of SpeG from Vibrio cholerae Is Revealed by Its Dodecameric Structure. Journal of Molecular Biology, 2015, 427, 1316-1334.	4.2	24
28	The ancestral activation promiscuity of ADP-glucose pyrophosphorylases from oxygenic photosynthetic organisms. BMC Evolutionary Biology, 2013, 13, 51.	3.2	23
29	The Crystal Structure of Nitrosomonas europaea Sucrose Synthase Reveals Critical Conformational Changes and Insights into Sucrose Metabolism in Prokaryotes. Journal of Bacteriology, 2015, 197, 2734-2746.	2.2	23
30	Phosphorylation of ADP-Glucose Pyrophosphorylase During Wheat Seeds Development. Frontiers in Plant Science, 2020, 11, 1058.	3.6	23
31	Structure, function, and evolution of plant ADP-glucose pyrophosphorylase. Plant Molecular Biology, 2022, 108, 307-323.	3.9	23
32	The <scp>ADP</scp>â€•glucose pyrophosphorylase from <i><scp>S</scp>treptococcus mutans</i> provides evidence for the regulation of polysaccharide biosynthesis in <scp>F</scp>irmicutes. Molecular Microbiology, 2013, 90, 1011-1027.	2.5	21
33	The ADP-glucose binding site of the Escherichia coli glycogen synthase. Archives of Biochemistry and Biophysics, 2006, 453, 188-196.	3.0	20
34	Enhancement of the reductive activation of chloroplast fructose-1,6-bisphosphatase by modulators and protein perturbants. FEBS Journal, 1994, 222, 467-474.	0.2	16
35	Alteration of inhibitor selectivity by site-directed mutagenesis of Arg294 in the ADP-glucose pyrophosphorylase from Anabaena PCC 7120. Archives of Biochemistry and Biophysics, 2002, 400, 208-214.	3.0	16
36	Unraveling the Activation Mechanism of the Potato Tuber ADP-Glucose Pyrophosphorylase. PLoS ONE, 2013, 8, e66824.	2.5	16

#	Article	IF	Citations
37	A Novel Dual Allosteric Activation Mechanism of Escherichia coli ADP-Glucose Pyrophosphorylase: The Role of Pyruvate. PLoS ONE, 2014, 9, e103888.	2.5	16
38	Functional demonstrations of starch binding domains present in Ostreococcus tauri starch synthases isoforms. BMC Research Notes, 2015, 8, 613.	1.4	15
39	Regulatory Properties of the ADP-Glucose Pyrophosphorylase from the Clostridial Firmicutes Member Ruminococcus albus. Journal of Bacteriology, 2018, 200, .	2.2	14
40	Conserved residues of the Pro103â€“Arg115 loop are involved in triggering the allosteric response of the <i>Escherichia coli</i> ADPâ€glucose pyrophosphorylase. Protein Science, 2015, 24, 714-728.	7.6	13
41	On the Roles of Wheat Endosperm ADP-Glucose Pyrophosphorylase Subunits. Frontiers in Plant Science, 2018, 9, 1498.	3.6	13
42	ADPglucose pyrophosphorylaseâ€™s N-terminus: Structural role in allosteric regulation. Biochemical and Biophysical Research Communications, 2006, 343, 216-221.	2.1	12
43	Regulatory Properties of Potatoâ€“Arabidopsis Hybrid ADP-Glucose Pyrophosphorylase. Plant and Cell Physiology, 2007, 48, 875-880.	3.1	12
44	Insights into Glycogen Metabolism in Chemolithoautotrophic Bacteria from Distinctive Kinetic and Regulatory Properties of ADP-Glucose Pyrophosphorylase from Nitrosomonas europaea. Journal of Bacteriology, 2012, 194, 6056-6065.	2.2	12
45	On the Ancestral UDP-Glucose Pyrophosphorylase Activity of GalF from Escherichia coli. Frontiers in Microbiology, 2015, 6, 1253.	3.5	12
46	Domain Swapping between a Cyanobacterial and a Plant Subunit ADP-Glucose Pyrophosphorylase. Plant and Cell Physiology, 2006, 47, 523-530.	3.1	11
47	Identification and characterization of a novel starch branching enzyme from the picoalgae Ostreococcus tauri. Archives of Biochemistry and Biophysics, 2017, 618, 52-61.	3.0	11
48	Allosteric Control of Substrate Specificity of the Escherichia coli ADP-Glucose Pyrophosphorylase. Frontiers in Chemistry, 2017, 5, 41.	3.6	11
49	Practical spectrophotometric assay for the dapE-encoded N-succinyl-L,L-diaminopimelic acid desuccinylase, a potential antibiotic target. PLoS ONE, 2018, 13, e0196010.	2.5	11
50	Structural analysis reveals a pyruvate-binding activator site in the Agrobacterium tumefaciens ADPâ€“glucose pyrophosphorylase. Journal of Biological Chemistry, 2019, 294, 1338-1348.	3.4	11
51	Alkaline phosphatase inhibition by vanadyl-Î²-diketone complexes: electron density effects. Journal of Enzyme Inhibition and Medicinal Chemistry, 2009, 24, 22-28.	5.2	10
52	Identification of a novel starch synthase III from the picoalgae Ostreococcus tauri. Biochimie, 2017, 133, 37-44.	2.6	10
53	On the stability of nucleoside diphosphate glucose metabolites: implications for studies of plant carbohydrate metabolism. Journal of Experimental Botany, 2017, 68, 3331-3337.	4.8	10
54	Determination of dissociation constants of protein ligands by thermal shift assay. Biochemical and Biophysical Research Communications, 2022, 590, 1-6.	2.1	10

#	Article	IF	Citations
55	Resurrecting the Regulatory Properties of the Ostreococcus tauri ADP-Glucose Pyrophosphorylase Large Subunit. Frontiers in Plant Science, 2018, 9, 1564.	3.6	9
56	Mapping of a Regulatory Site of the Escherichia coli ADP-Glucose Pyrophosphorylase. Frontiers in Molecular Biosciences, 2019, 6, 89.	3.5	9
57	Evidence for two distinct Mg2+ binding sites in GsÎ± and GiÎ±1 proteins. Biochemical and Biophysical Research Communications, 2008, 372, 866-869.	2.1	8
58	Gcn5-Related N-Acetyltransferases (GNATs) With a Catalytic Serine Residue Can Play Ping-Pong Too. Frontiers in Molecular Biosciences, 2021, 8, 646046.	3.5	8
59	Chloroplast fructose-1,6-bisphosphatase: Modification of non-covalent interactions promote the activation by chimericEscherichia colithioredoxins. FEBS Letters, 1996, 380, 123-126.	2.8	7
60	A Chimeric UDP-Glucose Pyrophosphorylase Produced by Protein Engineering Exhibits Sensitivity to Allosteric Regulators. International Journal of Molecular Sciences, 2013, 14, 9703-9721.	4.1	7
61	Biâ€national and interdisciplinary course in enzyme engineering. Biochemistry and Molecular Biology Education, 2010, 38, 370-379.	1.2	6
62	Monofluorophosphate Blocks Internal Polysaccharide Synthesis in Streptococcus mutans. PLoS ONE, 2017, 12, e0170483.	2.5	6
63	On the simultaneous activation of Agrobacterium tumefaciens ADP-glucose pyrophosphorylase by pyruvate and fructose 6-phosphate. Biochimie, 2020, 171-172, 23-30.	2.6	6
64	Effect of alkaline pH on the activity and the structure of chloroplast fructose-1,6-bisphosphatase. Plant Science, 1990, 70, 35-41.	3.6	4
65	The ADP-glucose pyrophosphorylase from Melainabacteria: a comparative study between photosynthetic and non-photosynthetic bacterial sources. Biochimie, 2022, 192, 30-37.	2.6	3
66	Carbohydrate Metabolism in Bacteria: Alternative Specificities in ADP-Glucose Pyrophosphorylases Open Novel Metabolic Scenarios and Biotechnological Tools. Frontiers in Microbiology, 2022, 13, 867384.	3.5	2
67	Structural Determinants of Sugar Alcohol Biosynthesis in Plants: The Crystal Structures of Mannose-6-Phosphate and Aldose-6-Phosphate Reductases. Plant and Cell Physiology, 2022, 63, 658-670.	3.1	1
68	Investigating the Electrostatic Role of a Critical Arginine for the Catalysis of E. Coli ADP-Glucose Pyrophosphorylase. Biophysical Journal, 2013, 104, 557a.	0.5	0
69	Molecular architecture of the glucose 1â€phosphate site of ADPâ€glucose pyrophosphorylases. FASEB Journal, 2006, 20, A475.	0.5	0
70	Homology model of starch synthases. FASEB Journal, 2006, 20, A904.	0.5	0
71	Synthesis of the Ostreococcus tauri ADPâ€glucose pyrophosphorylase genes and characterization of their expressed subunits. FASEB Journal, 2008, 22, 841.3.	0.5	0
72	Monofluorophosphate inhibits the key step of internal polysaccharide biosynthesis in Streptococcus mutans. FASEB Journal, 2013, 27, 560.16.	0.5	0

#	Article	IF	Citations
73	The Importance of a Loop Structure in ATP Apparent Affinity and Allosteric Activation of Escherichia coli ADPâ€Glucose Pyrophosphorylase. FASEB Journal, 2013, 27, 1004.10.	0.5	0
74	Pyruvate Revisited as a Synergistic Secondary Activator of the Escherichia coli ADPâ€glucose Pyrophosphorylase. FASEB Journal, 2013, 27, 1004.8.	0.5	0
75	Role of the interâ€subunit surface interaction in the regulation of the ADPâ€glucose pyrophosphorylase from Agrobacterium tumefaciens. FASEB Journal, 2017, 31, 765.17.	0.5	0
76	Siteâ€directed mutagenesis of Serineâ€72 reveals the location of the fructose 6â€phosphate regulatory site of the <i>Agrobacterium tumefaciens</i> <scp>ADP</scp> â€glucose pyrophosphorylase. Protein Science, 2022, 31, .	7.6	0