Rosario A MuÃ±oz-Clares

List of Publications by Year
in descending order

55 papers	1,000 citations	361413 20 h-index	477307 29 g-index
55 all docs	55 docs citations	55 times ranked	953 citing authors

#	Article	IF	Citations
1	The Crystal Structure of A Ternary Complex of Betaine Aldehyde Dehydrogenase from Pseudomonas aeruginosa Provides New Insight into the Reaction Mechanism and Shows A Novel Binding Mode of the 2â€²-Phosphate of NADP+ and A Novel Cation Binding Site. Journal of Molecular Biology, 2009, 385, 542-557.	4.2	64
2	Purification and Properties of Betaine Aldehyde Dehydrogenase Extracted from Detached Leaves of Amaranthus hypochondriacus L. Subjected to Water Deficit. Journal of Plant Physiology, 1994, 143, 145-152.	3.5	56
3	Amino Acid Residues Critical for the Specificity for Betaine Aldehyde of the Plant ALDH10 Isoenzyme Involved in the Synthesis of Glycine Betaine Â Â. Plant Physiology, 2012, 158, 1570-1582.	4.8	45
4	Structural determinants of substrate specificity in aldehyde dehydrogenases. Chemico-Biological Interactions, 2013, 202, 51-61.	4.0	43
5	Kinetic and structural features of betaine aldehyde dehydrogenases: Mechanistic and regulatory implications. Archives of Biochemistry and Biophysics, 2010, 493, 71-81.	3.0	41
6	Steady-state kinetic mechanism of the NADP+- and NAD+-dependent reactions catalysed by betaine aldehyde dehydrogenase from Pseudomonas aeruginosa. Biochemical Journal, 2000, 352, 675-683.	3.7	39
7	Betaine-Aldehyde Dehydrogenase from Amaranth Leaves Efficiently Catalyzes the NAD-Dependent Oxidation of Dimethylsulfoniopropionaldehyde to Dimethylsulfoniopropionate. Archives of Biochemistry and Biophysics, 1997, 337, 81-88.	3.0	36
8	Physiological Implications of the Kinetics of Maize Leaf Phosphoenolpyruvate Carboxylase. Plant Physiology, 2000, 123, 149-160.	4.8	34
9	Monovalent cations requirements for the stability of betaine aldehyde dehydrogenase from Pseudomonas aeruginosa, porcine kidney and amaranth leaves. Chemico-Biological Interactions, 2003, 143-144, 139-148.	4.0	33
10	Betaine aldehyde dehydrogenase from Pseudomonas aeruginosa: cloning, over-expression in Escherichia coli, and regulation by choline and salt. Archives of Microbiology, 2006, 185, 14-22.	2.2	31
11	Trehalose-Mediated Inhibition of the Plasma Membrane H + -ATPase from Kluyveromyces lactis : Dependence on Viscosity and Temperature. Journal of Bacteriology, 2002, 184, 4384-4391.	2.2	30
12	Disulfiram irreversibly aggregates betaine aldehyde dehydrogenaseâ€"A potential target for antimicrobial agents against Pseudomonas aeruginosa. Biochemical and Biophysical Research Communications, 2006, 341, 408-415.	2.1	30
13	Kinetic evidence of the existence of a regulatory phosphoenolpyruvate binding site in maize leaf phosphoenolpyruvate carboxylase. Archives of Biochemistry and Biophysics, 1990, 276, 180-190.	3.0	29
14	Thermal inactivation of the plasma membrane H+-ATPase from Kluyveromyces lactis. Protection by trehalose. BBA - Proteins and Proteomics, 2001, 1544, 64-73.	2.1	29
15	Fumonisin B1, a sphingoid toxin, is a potent inhibitor of the plasma membrane H+-ATPase. Planta, 2005, 221, 589-596.	3.2	29
16	Re-examination of the roles of PEP and Mg2+ in the reaction catalysed by the phosphorylated and non-phosphorylated forms of phosphoenolpyruvate carboxylase from leaves of ZeaÂmays. Biochemical Journal, 1998, 332, 633-642.	3.7	27
17	Functional and structural analysis of catalase oxidized by singlet oxygen. Biochimie, 2005, 87, 205-214.	2.6	27
18	Aldehyde dehydrogenase diversity in bacteria of the Pseudomonas genus. Chemico-Biological Interactions, 2019, 304, 83-87.	4.0	26

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19	The disulfiram metabolites S-methyl-N,N-diethyldithiocarbamoyl sulfoxide and S-methyl-N,N-diethylthiocarbamoyl sulfone irreversibly inactivate betaine aldehyde dehydrogenase from Pseudomonas aeruginosa, both in vitro and in situ, and arrest bacterial growth. Biochimie, 2011, 93, 286-295.	2.6	23
20	Inactivation of betaine aldehyde dehydrogenase from Pseudomonas aeruginosa and Amaranthus hypochondriacus L. leaves by disulfiram. Chemico-Biological Interactions, 2003, 143-144, 149-158.	4.0	20
21	Crystallographic evidence for active-site dynamics in the hydrolytic aldehyde dehydrogenases. Implications for the deacylation step of the catalyzed reaction. Chemico-Biological Interactions, 2011, 191, 137-146.	4.0	20
22	Modulation of the reactivity of the essential cysteine residue of betaine aldehyde dehydrogenase from Pseudomonas aeruginosa. Biochemical Journal, 2002, 361, 577-585.	3.7	19
23	Novel NADPHâ€"cysteine covalent adduct found in the active site of an aldehyde dehydrogenase. Biochemical Journal, 2011, 439, 443-455.	3.7	19
24	Exploring the evolutionary route of the acquisition of betaine aldehyde dehydrogenase activity by plant ALDH10 enzymes: implications for the synthesis of the osmoprotectant glycine betaine. BMC Plant Biology, 2014, 14, 149.	3.6	19
25	Steady-state kinetic mechanism of the NADP+- and NAD+-dependent reactions catalysed by betaine aldehyde dehydrogenase from Pseudomonas aeruginosa. Biochemical Journal, 2000, 352, 675.	3.7	17
26	Site-directed mutagenesis and homology modeling indicate an important role of cysteine 439 in the stability of betaine aldehyde dehydrogenase from Pseudomonas aeruginosa. Biochimie, 2005, 87, 1056-1064.	2.6	15
27	Potassium and Ionic Strength Effects on the Conformational and Thermal Stability of Two Aldehyde Dehydrogenases Reveal Structural and Functional Roles of K+-Binding Sites. PLoS ONE, 2013, 8, e54899.	2.5	13
28	Substrate inhibition by betaine aldehyde of betaine aldehyde dehydrogenase from leaves of Amaranthus hypochondriacus L.. BBA - Proteins and Proteomics, 1997, 1341, 49-57.	2.1	12
29	Amino acid residues that affect the basicity of the catalytic glutamate of the hydrolytic aldehyde dehydrogenases. Chemico-Biological Interactions, 2015, 234, 45-58.	4.0	12
30	Residues that influence coenzyme preference in the aldehyde dehydrogenases. Chemico-Biological Interactions, 2015, 234, 59-74.	4.0	12
31	Short-term Regulation of Maize Leaf Phosphoenolpyruvate Carboxylase by Light. Journal of Plant Physiology, 1987, 128, 361-369.	3.5	11
32	Mechanisms of protection against irreversible oxidation of the catalytic cysteine of ALDH enzymes: Possible role of vicinal cysteines. Chemico-Biological Interactions, 2017, 276, 52-64.	4.0	11
33	Identification of the allosteric site for neutral amino acids in the maize C4 isozyme of phosphoenolpyruvate carboxylase: The critical role of Ser-100. Journal of Biological Chemistry, 2018, 293, 9945-9957.	3.4	11
34	Ligand-induced conformational changes of betaine aldehyde dehydrogenase from Pseudomonas aeruginosa and Amaranthus hypochondriacus L. leaves affecting the reactivity of the catalytic thiol. Chemico-Biological Interactions, 2003, 143-144, 129-137.	4.0	9
35	Complex, unusual conformational changes in kidney betaine aldehyde dehydrogenase suggested by chemical modification with disulfiram. Archives of Biochemistry and Biophysics, 2007, 468, 167-173.	3.0	9
36	Desensitization to glucose 6-phosphate of phosphoenolpyruvate carboxylase from maize leaves by pyridoxal 5â€²-phosphate. BBA - Proteins and Proteomics, 1997, 1337, 207-216.	2.1	8

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37	Modulation of the reactivity of the essential cysteine residue of betaine aldehyde dehydrogenase from Pseudomonas aeruginosa. Biochemical Journal, 2002, 361, 577.	3.7	8
38	Reversible, partial inactivation of plant betaine aldehyde dehydrogenase by betaine aldehyde: mechanism and possible physiological implications. Biochemical Journal, 2016, 473, 873-885.	3.7	8
39	The importance of assessing aldehyde substrate inhibition for the correct determination of kinetic parameters and mechanisms: the case of the ALDH enzymes. Chemico-Biological Interactions, 2019, 305, 86-97.	4.0	8
40	Tryptophan metabolism and its interaction with gluconeogenesis in mammals: Studies with the guinea pig, mongolian gerbil, and sheep. Archives of Biochemistry and Biophysics, 1981, 209, 713-717.	3.0	7
41	Kinetics of phosphoenolpyruvate carboxylase from Zea mays leaves at high concentration of substrates. BBA - Proteins and Proteomics, 2001, 1546, 242-252.	2.1	7
42	Potential monovalent cation-binding sites in aldehyde dehydrogenases. Chemico-Biological Interactions, 2013, 202, 41-50.	4.0	7
43	Phosphoenolpyruvate Carboxylase and Malic Enzyme in Leaves of two Populations of Maize Differing in Grain Yield. Journal of Plant Physiology, 1994, 143, 15-20.	3.5	5
44	Response of Phosphoenolpyruvate Carboxylase from Maize Leaves to Moderate Water Deficit. Journal of Plant Physiology, 1999, 155, 631-638.	3.5	5
45	Complexes of NADH with betaine aldehyde dehydrogenase from leaves of the plant Amaranthus hypochondriacus L.. Chemico-Biological Interactions, 2001, 130-132, 71-80.	4.0	5
46	Reaction of the catalytic cysteine of betaine aldehyde dehydrogenase from Pseudomonas aeruginosa with arsenite-BAL and phenylarsine oxide. Chemico-Biological Interactions, 2009, 178, 64-69.	4.0	5
47	Bona fide choline monoxygenases evolved in Amaranthaceae plants from oxygenases of unknown function: Evidence from phylogenetics, homology modeling and docking studies. PLoS ONE, 2018, 13, e0204711.	2.5	5
48	Structural and biochemical evidence of the glucose 6-phosphate-allosteric site of maize C4-phosphoenolpyruvate carboxylase: its importance in the overall enzyme kinetics. Biochemical Journal, 2020, 477, 2095-2114.	3.7	5
49	Effects of Glycerol on the Kinetic Properties of Betaine Aldehyde Dehydrogenase. Advances in Experimental Medicine and Biology, 1996, 414, 261-268.	1.6	4
50	Further Studies of the Short-term Regulation of Maize Leaf Phosphoenolpyruvate Carboxylase by Light. Journal of Plant Physiology, 1987, 129, 191-199.	3.5	3
51	Hysteretic Properties of Maize Leaf Phosphoenolpyruvate Carboxylase in Crude Desalted Extracts. Effects of Metabolites and Light. Journal of Plant Physiology, 1990, 136, 451-457.	3.5	3
52	Inactivation of betaine aldehyde dehydrogenase from amaranth leaves by pyridoxal 5â€²-phosphate. Plant Science, 1999, 143, 9-17.	3.6	3
53	The critical role of the aldehyde dehydrogenase PauC in spermine, spermidine, and diaminopropane toxicity in <i>Pseudomonas aeruginosa</i>: Its possible use as a drug target. FEBS Journal, 2022, 289, 2685-2705.	4.7	2
54	A new method for the assay of tryptophan 2,3-dioxygenase. FEBS Letters, 1980, 117, 265-268.	2.8	1

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55	Multiple conformations in solution of the maize C4-phosphoenolpyruvate carboxylase isozyme. Heliyon, 2021, 7, e08464.	3.2	0