Gianluca Molla

List of Publications by Year
in descending order

90	3,837	35	59
papers	citations	h-index (109311)	g-index (133244)

91	91	91	2462
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Physiological functions of D-amino acid oxidases: from yeast to humans. Cellular and Molecular Life Sciences, 2007, 64, 1373-1394.	5.4	319
2	The x-ray structure of D-amino acid oxidase at very high resolution identifies the chemical mechanism of flavin-dependent substrate dehydrogenation. Proceedings of the National Academy of Sciences of the United States of America, 2000, 97, 12463-12468.	7.1	185
3	pLG72 Modulates Intracellular D-Serine Levels through Its Interaction with D-Amino Acid Oxidase. Journal of Biological Chemistry, 2008, 283, 22244-22256.	3.4	135
4	Properties and applications of microbial D-amino acid oxidases: current state and perspectives. Applied Microbiology and Biotechnology, 2008, 78, 1-16.	3.6	131
5	Characterization of humand-amino acid oxidase. FEBS Letters, 2006, 580, 2358-2364.	2.8	127
6	New biotech applications from evolved D-amino acid oxidases. Trends in Biotechnology, 2011, 29, 276-283.	9.3	125
7	Yeast d -Amino Acid Oxidase: Structural Basis of its Catalytic Properties. Journal of Molecular Biology, 2002, 324, 535-546.	4.2	118
8	l-Amino acid oxidase as biocatalyst: a dream too far?. Applied Microbiology and Biotechnology, 2013, 97, 9323-9341.	3.6	104
9	Structureâ€"function relationships in human d-amino acid oxidase. Amino Acids, 2012, 43, 1833-1850.	2.7	89
10	Cholesterol oxidase: biotechnological applications. FEBS Journal, 2009, 276, 6857-6870.	4.7	86
11	D-Amino Acid Oxidase Inhibitors as a Novel Class of Drugs for Schizophrenia Therapy. Current Pharmaceutical Design, 2013, 19, 2499-2511.	1.9	84
12	Engineering the Substrate Specificity ofd-Amino-acid Oxidase. Journal of Biological Chemistry, 2002, 277, 27510-27516.	3.4	78
13	Catalytic Properties of d-Amino Acid Oxidase in Cephalosporin C Bioconversion: A Comparison between Proteins from Different Sources. Biotechnology Progress, 2008, 20, 467-473.	2.6	71
14	Glyphosate Resistance by Engineering the Flavoenzyme Glycine Oxidase. Journal of Biological Chemistry, 2009, 284, 36415-36423.	3.4	70
15	Evolution of an acylase active on cephalosporin C. Protein Science, 2005, 14, 3064-3076.	7.6	69
16	Overexpression inEscherichia coliof a Recombinant ChimericRhodotorula gracilisd-Amino Acid Oxidase. Protein Expression and Purification, 1998, 14, 289-294.	1.3	66
17	Cholesterol Oxidase from Brevibacterium sterolicum. Journal of Biological Chemistry, 2001, 276, 18024-18030.	3.4	66
18	Breaking the mirror: l-Amino acid deaminase, a novel stereoselective biocatalyst. Biotechnology Advances, 2017, 35, 657-668.	11.7	65

#	Article	IF	Citations
19	Optimization of glutaryl-7-aminocephalosporanic acid acylase expression in E. coli. Protein Expression and Purification, 2008, 61, 131-137.	1.3	64
20	Dissecting the Structural Determinants of the Stability of Cholesterol Oxidase Containing Covalently Bound Flavin. Journal of Biological Chemistry, 2005, 280, 22572-22581.	3.4	60
21	Enzymatic Conversion of Unnatural Amino Acids by YeastD-Amino Acid Oxidase. Advanced Synthesis and Catalysis, 2006, 348, 2183-2190.	4.3	59
22	Structure-Function Correlation in Glycine Oxidase from Bacillus subtilis. Journal of Biological Chemistry, 2004, 279, 29718-29727.	3.4	58
23	Role of Arginine 285 in the Active Site of Rhodotorula gracilis d-Amino Acid Oxidase. Journal of Biological Chemistry, 2000, 275, 24715-24721.	3.4	57
24	Studies on the Reaction Mechanism of Rhodotorula gracilis d-Amino-acid Oxidase. Journal of Biological Chemistry, 1999, 274, 36233-36240.	3.4	52
25	O2 Reactivity of Flavoproteins. Journal of Biological Chemistry, 2010, 285, 24439-24446.	3.4	52
26	Cephalosporin C acylase: dream and(/or) reality. Applied Microbiology and Biotechnology, 2013, 97, 2341-2355.	3.6	50
27	Effect of ligand binding on human <scp>D</scp>â€amino acid oxidase: Implications for the development of new drugs for schizophrenia treatment. Protein Science, 2010, 19, 1500-1512.	7.6	48
28	Structure-Function Relationships in l-Amino Acid Deaminase, a Flavoprotein Belonging to a Novel Class of Biotechnologically Relevant Enzymes. Journal of Biological Chemistry, 2016, 291, 10457-10475.	3.4	46
29	A biosensor for all d-amino acids using evolved d-amino acid oxidase. Journal of Biotechnology, 2008, 135, 377-384.	3.8	45
30	Characterization of the Covalently Bound Anionic Flavin Radical in Monoamine Oxidase A by Electron Paramagnetic Resonance. Journal of the American Chemical Society, 2007, 129, 16091-16097.	13.7	44
31	Relevance of weak flavin binding in human <scp>D</scp>â€amino acid oxidase. Protein Science, 2009, 18, 801-810.	7.6	43
32	Overexpression of a recombinant wild-type and His-tagged Bacillus subtilis glycine oxidase in Escherichia coli. FEBS Journal, 2002, 269, 1456-1463.	0.2	42
33	On the Oxygen Reactivity of Flavoprotein Oxidases. Journal of Biological Chemistry, 2008, 283, 24738-24747.	3.4	42
34	Cloning, sequencing and expression in E. coli of a d-amino acid oxidase cDNA from Rhodotorula gracilis active on cephalosporin C. Journal of Biotechnology, 1997, 58, 115-123.	3.8	40
35	Expression in Escherichia coli and in vitro refolding of the human protein pLG72. Protein Expression and Purification, 2006, 46, 150-155.	1.3	37
36	Engineering the Properties of D-Amino Acid Oxidases by a Rational and a Directed Evolution Approach. Current Protein and Peptide Science, 2007, 8, 600-618.	1.4	35

#	Article	IF	Citations
37	Analytical methods for the investigation of enzymeâ€catalyzed degradation of polyethylene terephthalate. FEBS Journal, 2021, 288, 4730-4745.	4.7	35
38	Modulating D-amino acid oxidase substrate specificity: production of an enzyme for analytical determination of all D-amino acids by directed evolution. Protein Engineering, Design and Selection, 2004, 17, 517-525.	2.1	34
39	Multistep enzyme catalysed deracemisation of 2-naphthyl alanine. Biocatalysis and Biotransformation, 2006, 24, 409-413.	2.0	33
40	Optimization of <scp>d</scp>â€amino acid oxidase for low substrate concentrations â€" towards a cancer enzyme therapy. FEBS Journal, 2009, 276, 4921-4932.	4.7	32
41	Optimization of human d-amino acid oxidase expression in Escherichia coli. Protein Expression and Purification, 2009, 68, 72-78.	1.3	32
42	Production of recombinant cholesterol oxidase containing covalently bound FAD in Escherichia coli. BMC Biotechnology, 2010, 10, 33.	3.3	31
43	Structural, Kinetic, and Pharmacodynamic Mechanisms of <scp>d</scp>-Amino Acid Oxidase Inhibition by Small Molecules. Journal of Medicinal Chemistry, 2013, 56, 3710-3724.	6.4	31
44	Kinetic mechanisms of glycine oxidase from Bacillus subtilis. FEBS Journal, 2003, 270, 1474-1482.	0.2	29
45	Expression in Escherichia coli of the catalytic domain of human proline oxidase. Protein Expression and Purification, 2012, 82, 345-351.	1.3	29
46	Regulation ofD-amino acid oxidase expression in the yeastRhodotorula gracilis. Yeast, 2003, 20, 1061-1069.	1.7	28
47	Advances in Enzymatic Synthesis of D-Amino Acids. International Journal of Molecular Sciences, 2020, 21, 3206.	4.1	28
48	Redox potentials and their pH dependence of D-amino-acid oxidase of Rhodotorula gracilis and Trigonopsis variabilis. FEBS Journal, 2000, 267, 6624-6632.	0.2	27
49	Deracemization and Stereoinversion of Î±â€Amino Acids by <scp>l</scp>â€Amino Acid Deaminase. Advanced Synthesis and Catalysis, 2017, 359, 3773-3781.	4.3	27
50	Conversion of the dimericD-amino acid oxidase fromRhodotorula gracilisto a monomeric form. A rational mutagenesis approach. FEBS Letters, 2002, 526, 43-48.	2.8	26
51	Is rat an appropriate animal model to study the involvement of <scp>d</scp>â€serine catabolism in schizophrenia? insights from characterization of <scp>d</scp>â€amino acid oxidase. FEBS Journal, 2011, 278, 4362-4373.	4.7	26
52	Characterization of human DAAO variants potentially related to an increased risk of schizophrenia. Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2013, 1832, 400-410.	3.8	26
53	Structure of a class III engineered cephalosporin acylase: comparisons with class I acylase and implications for differences in substrate specificity and catalytic activity. Biochemical Journal, 2013, 451, 217-226.	3.7	26
54	Expression of an evolved engineered variant of a bacterial glycine oxidase leads to glyphosate resistance in alfalfa. Journal of Biotechnology, 2014, 184, 201-208.	3.8	26

#	Article	IF	Citations
55	A thermostable L-aspartate oxidase: a new tool for biotechnological applications. Applied Microbiology and Biotechnology, 2013, 97, 7285-7295.	3.6	25
56	Structural and kinetic analyses of the H121A mutant of cholesterol oxidase. Biochemical Journal, 2006, 400, 13-22.	3.7	24
57	Competitive Inhibitors Unveil Structure/Function Relationships in Human D-Amino Acid Oxidase. Frontiers in Molecular Biosciences, 2017, 4, 80.	3.5	23
58	Relevance of the flavin binding to the stability and folding of engineered cholesterol oxidase containing noncovalently bound FAD. Protein Science, 2008, 17, 409-419.	7.6	22
59	Structureâ€"function relationships in human d-amino acid oxidase variants corresponding to known SNPs. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2015, 1854, 1150-1159.	2.3	22
60	Enzymatic Detection of d-Amino Acids. Methods in Molecular Biology, 2012, 794, 273-289.	0.9	21
61	Strategic manipulation of an industrial biocatalyst â€" evolution of a cephalosporinÂ<scp>C</scp> acylase. FEBS Journal, 2014, 281, 2443-2455.	4.7	21
62	Structure and kinetic properties of human<scp>d</scp>â€aspartate oxidase, the enzymeâ€controlling<scp>d</scp>â€aspartate levels in brain. FASEB Journal, 2020, 34, 1182-1197.	0.5	19
63	On the reaction of dâ€amino acid oxidase with dioxygen: O₂ diffusion pathways and enhancement of reactivity. FEBS Journal, 2011, 278, 482-492.	4.7	16
64	Novel biosensors based on optimized glycine oxidase. FEBS Journal, 2014, 281, 3460-3472.	4.7	16
65	Regulating levels of the neuromodulator <scp>d</scp>â€serine in human brain: structural insight into pLG72 and <scp>d</scp>â€amino acid oxidase interaction. FEBS Journal, 2016, 283, 3353-3370.	4.7	15
66	Identification and role of ionizing functional groups at the active center ofRhodotorula gracilisD-amino acid oxidase. FEBS Letters, 2001, 507, 323-326.	2.8	14
67	Dissection of the structural determinants involved in formation of the dimeric form of D-amino acid oxidase from Rhodotorula gracilis: role of the size of the ÂF5-ÂF6 loop. Protein Engineering, Design and Selection, 2003, 16, 1063-1069.	2.1	14
68	Investigating the role of active site residues of Rhodotorula gracilis d-amino acid oxidase on its substrate specificity. Biochimie, 2007, 89, 360-368.	2.6	14
69	Aminoacetone oxidase from <i>Streptococcus oligofermentans</i> belongs to a new three-domain family of bacterial flavoproteins. Biochemical Journal, 2014, 464, 387-399.	3.7	13
70	<i>In vitro</i> evolution of an <scp>l</scp>-amino acid deaminase active on <scp>l</scp>-1-naphthylalanine. Catalysis Science and Technology, 2018, 8, 5359-5367.	4.1	13
71	Human D-aspartate Oxidase: A Key Player in D-aspartate Metabolism. Frontiers in Molecular Biosciences, 2021, 8, 689719.	3.5	13
72	Properties of l-amino acid deaminase: En route to optimize bioconversion reactions. Biochimie, 2019, 158, 199-207.	2.6	12

#	Article	IF	Citations
73	An Efficient Protein Evolution Workflow for the Improvement of Bacterial PET Hydrolyzing Enzymes. International Journal of Molecular Sciences, 2022, 23, 264.	4.1	12
74	On the mechanism of Rhodotorula gracilis d-amino acid oxidase: role of the active site serine 335. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2004, 1702, 19-32.	2.3	11
75	Tryptophan 243 affects interprotein contacts, cofactor binding and stability in D-amino acid oxidase from Rhodotorula gracilis. FEBS Journal, 2006, 273, 504-512.	4.7	11
76	Catalytic and redox properties of glycine oxidase from Bacillus subtilis. Biochimie, 2009, 91, 604-612.	2.6	11
77	D-Amino Acid Oxidase-pLG72 Interaction and D-Serine Modulation. Frontiers in Molecular Biosciences, 2018, 5, 3.	3.5	11
78	Engineering substrate promiscuity in halophilic alcohol dehydrogenase (HvADH2) by in silico design. PLoS ONE, 2017, 12, e0187482.	2.5	11
79	Activity of yeast d-amino acid oxidase on aromatic unnatural amino acids. Journal of Molecular Catalysis B: Enzymatic, 2008, 50, 93-98.	1.8	10
80	Recombinant human Tat-Hsp70-2: A tool for neuroprotection. Protein Expression and Purification, 2017, 138, 18-24.	1.3	10
81	Glycine oxidase from Bacillus subtilis: Role of Histidine 244 and Methionine 261. Biochimie, 2007, 89, 1372-1380.	2.6	8
82	FAD binding in glycine oxidase from Bacillus subtilis. Biochimie, 2009, 91, 1499-1508.	2.6	8
83	Revisitation of the Î²Cl-Elimination Reaction of d-Amino Acid Oxidase. Journal of Biological Chemistry, 2011, 286, 40987-40998.	3.4	6
84	Succinic Semialdehyde Dehydrogenase Deficiency: In Vitro and In Silico Characterization of a Novel Pathogenic Missense Variant and Analysis of the Mutational Spectrum of ALDH5A1. International Journal of Molecular Sciences, 2020, 21, 8578.	4.1	5
85	Biochemical characterization of mouse d-aspartate oxidase. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2020, 1868, 140472.	2.3	4
86	The role of tyrosines 223 and 238 in Rhodotorula gracilis d-amino acid oxidase catalysis: Interpretation of double mutations. Enzyme and Microbial Technology, 2006, 38, 795-802.	3.2	3
87	Overexpression of a bacterial chymotrypsin: Application for l-amino acid ester hydrolysis. Enzyme and Microbial Technology, 2011, 49, 560-566.	3.2	3
88	The <i>conundrum</i> in enzymatic reactions related to biosynthesis of <scp>d</scp>â€amino acids in bacteria. FEBS Journal, 2022, 289, 5895-5898.	4.7	2
89	Biochemical Properties and Physiological Functions of pLG72: Twenty Years of Investigations. Biomolecules, 2022, 12, 858.	4.0	2
90	Special issue on â€œ d -amino acids: biology in the mirrorâ€ Biochimica Et Biophysica Acta - Proteins and Proteomics, 2018, 1866, 741-742.	2.3	0