

# Gianluca Molla

## List of Publications by Year in Descending Order

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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.

88  
papers

3,177  
citations

34  
h-index

53  
g-index

91  
ext. papers

3,499  
ext. citations

4.9  
avg, IF

5.08  
L-index

#	Paper	IF	Citations
88	Analytical methods for the investigation of enzyme-catalyzed degradation of polyethylene terephthalate. <i>FEBS Journal</i> , <b>2021</b> , 288, 4730-4745	5.7	10
87	Human D-aspartate Oxidase: A Key Player in D-aspartate Metabolism. <i>Frontiers in Molecular Biosciences</i> , <b>2021</b> , 8, 689719	5.6	0
86	An Efficient Protein Evolution Workflow for the Improvement of Bacterial PET Hydrolyzing Enzymes.. <i>International Journal of Molecular Sciences</i> , <b>2021</b> , 23,	6.3	2
85	Advances in Enzymatic Synthesis of D-Amino Acids. <i>International Journal of Molecular Sciences</i> , <b>2020</b> , 21,	6.3	11
84	Structure and kinetic properties of human d-aspartate oxidase, the enzyme-controlling d-aspartate levels in brain. <i>FASEB Journal</i> , <b>2020</b> , 34, 1182-1197	0.9	11
83	Succinic Semialdehyde Dehydrogenase Deficiency: In Vitro and In Silico Characterization of a Novel Pathogenic Missense Variant and Analysis of the Mutational Spectrum of. <i>International Journal of Molecular Sciences</i> , <b>2020</b> , 21,	6.3	2
82	Biochemical characterization of mouse d-aspartate oxidase. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , <b>2020</b> , 1868, 140472	4	4
81	Properties of l-amino acid deaminase: En route to optimize bioconversion reactions. <i>Biochimie</i> , <b>2019</b> , 158, 199-207	4.6	7
80	D-Amino Acid Oxidase-pLG72 Interaction and D-Serine Modulation. <i>Frontiers in Molecular Biosciences</i> , <b>2018</b> , 5, 3	5.6	9
79	In vitro evolution of an L-amino acid deaminase active on L-1-naphthylalanine. <i>Catalysis Science and Technology</i> , <b>2018</b> , 8, 5359-5367	5.5	11
78	Deracemization and Stereoconversion of $\alpha$ -Amino Acids by l-Amino Acid Deaminase. <i>Advanced Synthesis and Catalysis</i> , <b>2017</b> , 359, 3773-3781	5.6	21
77	Breaking the mirror: l-Amino acid deaminase, a novel stereoselective biocatalyst. <i>Biotechnology Advances</i> , <b>2017</b> , 35, 657-668	17.8	45
76	Recombinant human Tat-Hsp70-2: A tool for neuroprotection. <i>Protein Expression and Purification</i> , <b>2017</b> , 138, 18-24	2	6
75	Competitive Inhibitors Unveil Structure/Function Relationships in Human D-Amino Acid Oxidase. <i>Frontiers in Molecular Biosciences</i> , <b>2017</b> , 4, 80	5.6	17
74	Engineering substrate promiscuity in halophilic alcohol dehydrogenase (HvADH2) by in silico design. <i>PLoS ONE</i> , <b>2017</b> , 12, e0187482	3.7	7
73	Regulating levels of the neuromodulator d-serine in human brain: structural insight into pLG72 and d-amino acid oxidase interaction. <i>FEBS Journal</i> , <b>2016</b> , 283, 3353-70	5.7	12
72	Structure-Function Relationships in l-Amino Acid Deaminase, a Flavoprotein Belonging to a Novel Class of Biotechnologically Relevant Enzymes. <i>Journal of Biological Chemistry</i> , <b>2016</b> , 291, 10457-75	5.4	36

71	Structure-function relationships in human d-amino acid oxidase variants corresponding to known SNPs. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , <b>2015</b> , 1854, 1150-9	4	18
70	Expression of an evolved engineered variant of a bacterial glycine oxidase leads to glyphosate resistance in alfalfa. <i>Journal of Biotechnology</i> , <b>2014</b> , 184, 201-8	3.7	21
69	Aminoacetone oxidase from <i>Streptococcus oligofermentans</i> belongs to a new three-domain family of bacterial flavoproteins. <i>Biochemical Journal</i> , <b>2014</b> , 464, 387-99	3.8	9
68	Novel biosensors based on optimized glycine oxidase. <i>FEBS Journal</i> , <b>2014</b> , 281, 3460-72	5.7	14
67	Strategic manipulation of an industrial biocatalyst--evolution of a cephalosporin C acylase. <i>FEBS Journal</i> , <b>2014</b> , 281, 2443-55	5.7	20
66	L-amino acid oxidase as biocatalyst: a dream too far?. <i>Applied Microbiology and Biotechnology</i> , <b>2013</b> , 97, 9323-41	5.7	88
65	Cephalosporin C acylase: dream and(/or) reality. <i>Applied Microbiology and Biotechnology</i> , <b>2013</b> , 97, 2341-55	5.7	38
64	Structural, kinetic, and pharmacodynamic mechanisms of D-amino acid oxidase inhibition by small molecules. <i>Journal of Medicinal Chemistry</i> , <b>2013</b> , 56, 3710-24	8.3	26
63	A thermostable L-aspartate oxidase: a new tool for biotechnological applications. <i>Applied Microbiology and Biotechnology</i> , <b>2013</b> , 97, 7285-95	5.7	19
62	Characterization of human DAAO variants potentially related to an increased risk of schizophrenia. <i>Biochimica Et Biophysica Acta - Molecular Basis of Disease</i> , <b>2013</b> , 1832, 400-10	6.9	24
61	Structure of a class III engineered cephalosporin acylase: comparisons with class I acylase and implications for differences in substrate specificity and catalytic activity. <i>Biochemical Journal</i> , <b>2013</b> , 451, 217-26	3.8	23
60	D-amino acid oxidase inhibitors as a novel class of drugs for schizophrenia therapy. <i>Current Pharmaceutical Design</i> , <b>2013</b> , 19, 2499-511	3.3	70
59	Expression in <i>Escherichia coli</i> of the catalytic domain of human proline oxidase. <i>Protein Expression and Purification</i> , <b>2012</b> , 82, 345-51	2	21
58	Structure-function relationships in human D-amino acid oxidase. <i>Amino Acids</i> , <b>2012</b> , 43, 1833-50	3.5	82
57	Enzymatic detection of D-amino acids. <i>Methods in Molecular Biology</i> , <b>2012</b> , 794, 273-89	1.4	19
56	On the reaction of D-amino acid oxidase with dioxygen: O <sub>2</sub> diffusion pathways and enhancement of reactivity. <i>FEBS Journal</i> , <b>2011</b> , 278, 482-92	5.7	15
55	Is rat an appropriate animal model to study the involvement of D-serine catabolism in schizophrenia? Insights from characterization of D-amino acid oxidase. <i>FEBS Journal</i> , <b>2011</b> , 278, 4362-73	5.7	23
54	Overexpression of a bacterial chymotrypsin: application for L-amino acid ester hydrolysis. <i>Enzyme and Microbial Technology</i> , <b>2011</b> , 49, 560-6	3.8	3

53	New biotech applications from evolved D-amino acid oxidases. <i>Trends in Biotechnology</i> , <b>2011</b> , 29, 276-83	15.1	104
52	Revisitation of the $\alpha$ -elimination reaction of D-amino acid oxidase: new interpretation of the reaction that sparked flavoprotein dehydrogenation mechanisms. <i>Journal of Biological Chemistry</i> , <b>2011</b> , 286, 40987-98	5.4	4
51	O <sub>2</sub> reactivity of flavoproteins: dynamic access of dioxygen to the active site and role of a H <sup>+</sup> relay system in D-amino acid oxidase. <i>Journal of Biological Chemistry</i> , <b>2010</b> , 285, 24439-46	5.4	49
50	Production of recombinant cholesterol oxidase containing covalently bound FAD in <i>Escherichia coli</i> . <i>BMC Biotechnology</i> , <b>2010</b> , 10, 33	3.5	28
49	Effect of ligand binding on human D-amino acid oxidase: implications for the development of new drugs for schizophrenia treatment. <i>Protein Science</i> , <b>2010</b> , 19, 1500-12	6.3	41
48	Glyphosate resistance by engineering the flavoenzyme glycine oxidase. <i>Journal of Biological Chemistry</i> , <b>2009</b> , 284, 36415-36423	5.4	51
47	Relevance of weak flavin binding in human D-amino acid oxidase. <i>Protein Science</i> , <b>2009</b> , 18, 801-10	6.3	33
46	Optimization of D-amino acid oxidase for low substrate concentrations--towards a cancer enzyme therapy. <i>FEBS Journal</i> , <b>2009</b> , 276, 4921-32	5.7	22
45	Cholesterol oxidase: biotechnological applications. <i>FEBS Journal</i> , <b>2009</b> , 276, 6857-70	5.7	63
44	Catalytic and redox properties of glycine oxidase from <i>Bacillus subtilis</i> . <i>Biochimie</i> , <b>2009</b> , 91, 604-12	4.6	11
43	FAD binding in glycine oxidase from <i>Bacillus subtilis</i> . <i>Biochimie</i> , <b>2009</b> , 91, 1499-508	4.6	6
42	Optimization of human D-amino acid oxidase expression in <i>Escherichia coli</i> . <i>Protein Expression and Purification</i> , <b>2009</b> , 68, 72-8	2	27
41	Activity of yeast d-amino acid oxidase on aromatic unnatural amino acids. <i>Journal of Molecular Catalysis B: Enzymatic</i> , <b>2008</b> , 50, 93-98		9
40	Optimization of glutaryl-7-aminocephalosporanic acid acylase expression in <i>E. coli</i> . <i>Protein Expression and Purification</i> , <b>2008</b> , 61, 131-7	2	60
39	A biosensor for all D-amino acids using evolved D-amino acid oxidase. <i>Journal of Biotechnology</i> , <b>2008</b> , 135, 377-84	3.7	40
38	pLG72 modulates intracellular D-serine levels through its interaction with D-amino acid oxidase: effect on schizophrenia susceptibility. <i>Journal of Biological Chemistry</i> , <b>2008</b> , 283, 22244-56	5.4	123
37	On the oxygen reactivity of flavoprotein oxidases: an oxygen access tunnel and gate in <i>Brevibacterium sterolicum</i> cholesterol oxidase. <i>Journal of Biological Chemistry</i> , <b>2008</b> , 283, 24738-47	5.4	38
36	Properties and applications of microbial D-amino acid oxidases: current state and perspectives. <i>Applied Microbiology and Biotechnology</i> , <b>2008</b> , 78, 1-16	5.7	101

35	Relevance of the flavin binding to the stability and folding of engineered cholesterol oxidase containing noncovalently bound FAD. <i>Protein Science</i> , <b>2008</b> , 17, 409-19	6.3	19
34	Characterization of the covalently bound anionic flavin radical in monoamine oxidase a by electron paramagnetic resonance. <i>Journal of the American Chemical Society</i> , <b>2007</b> , 129, 16091-7	16.4	41
33	Physiological functions of D-amino acid oxidases: from yeast to humans. <i>Cellular and Molecular Life Sciences</i> , <b>2007</b> , 64, 1373-94	10.3	267
32	Engineering the properties of D-amino acid oxidases by a rational and a directed evolution approach. <i>Current Protein and Peptide Science</i> , <b>2007</b> , 8, 600-18	2.8	31
31	Investigating the role of active site residues of Rhodotorula gracilis D-amino acid oxidase on its substrate specificity. <i>Biochimie</i> , <b>2007</b> , 89, 360-8	4.6	10
30	Glycine oxidase from Bacillus subtilis: role of histidine 244 and methionine 261. <i>Biochimie</i> , <b>2007</b> , 89, 1372-80	4.8	6
29	Enzymatic Conversion of Unnatural Amino Acids by Yeast D-Amino Acid Oxidase. <i>Advanced Synthesis and Catalysis</i> , <b>2006</b> , 348, 2183-2190	5.6	51
28	Multistep enzyme catalysed deracemisation of 2-naphthyl alanine. <i>Biocatalysis and Biotransformation</i> , <b>2006</b> , 24, 409-413	2.5	27
27	Characterization of human D-amino acid oxidase. <i>FEBS Letters</i> , <b>2006</b> , 580, 2358-64	3.8	107
26	Expression in Escherichia coli and in vitro refolding of the human protein pLG72. <i>Protein Expression and Purification</i> , <b>2006</b> , 46, 150-5	2	35
25	Structural and kinetic analyses of the H121A mutant of cholesterol oxidase. <i>Biochemical Journal</i> , <b>2006</b> , 400, 13-22	3.8	21
24	Tryptophan 243 affects interprotein contacts, cofactor binding and stability in D-amino acid oxidase from Rhodotorula gracilis. <i>FEBS Journal</i> , <b>2006</b> , 273, 504-12	5.7	7
23	The role of tyrosines 223 and 238 in Rhodotorula gracilis d-amino acid oxidase catalysis: Interpretation of double mutations. <i>Enzyme and Microbial Technology</i> , <b>2006</b> , 38, 795-802	3.8	2
22	Dissecting the structural determinants of the stability of cholesterol oxidase containing covalently bound flavin. <i>Journal of Biological Chemistry</i> , <b>2005</b> , 280, 22572-81	5.4	57
21	Evolution of an acylase active on cephalosporin C. <i>Protein Science</i> , <b>2005</b> , 14, 3064-76	6.3	63
20	Catalytic properties of D-amino acid oxidase in cephalosporin C bioconversion: a comparison between proteins from different sources. <i>Biotechnology Progress</i> , <b>2004</b> , 20, 467-73	2.8	57
19	Structure-function correlation in glycine oxidase from Bacillus subtilis. <i>Journal of Biological Chemistry</i> , <b>2004</b> , 279, 29718-27	5.4	51
18	Modulating D-amino acid oxidase substrate specificity: production of an enzyme for analytical determination of all D-amino acids by directed evolution. <i>Protein Engineering, Design and Selection</i> , <b>2004</b> , 17, 517-25	1.9	31

17	On the mechanism of <i>Rhodotorula gracilis</i> D-amino acid oxidase: role of the active site serine 335. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , <b>2004</b> , 1702, 19-32	4	8
16	Kinetic mechanisms of glycine oxidase from <i>Bacillus subtilis</i> . <i>FEBS Journal</i> , <b>2003</b> , 270, 1474-82		27
15	Regulation of D-amino acid oxidase expression in the yeast <i>Rhodotorula gracilis</i> . <i>Yeast</i> , <b>2003</b> , 20, 1061-9	3.4	24
14	Dissection of the structural determinants involved in formation of the dimeric form of D-amino acid oxidase from <i>Rhodotorula gracilis</i> : role of the size of the betaF5-betaF6 loop. <i>Protein Engineering, Design and Selection</i> , <b>2003</b> , 16, 1063-9	1.9	11
13	Overexpression of a recombinant wild-type and His-tagged <i>Bacillus subtilis</i> glycine oxidase in <i>Escherichia coli</i> . <i>FEBS Journal</i> , <b>2002</b> , 269, 1456-63		36
12	Engineering the substrate specificity of D-amino-acid oxidase. <i>Journal of Biological Chemistry</i> , <b>2002</b> , 277, 27510-6	5.4	58
11	Conversion of the dimeric D-amino acid oxidase from <i>Rhodotorula gracilis</i> to a monomeric form. A rational mutagenesis approach. <i>FEBS Letters</i> , <b>2002</b> , 526, 43-8	3.8	21
10	Yeast D-amino acid oxidase: structural basis of its catalytic properties. <i>Journal of Molecular Biology</i> , <b>2002</b> , 324, 535-46	6.5	98
9	Cholesterol oxidase from <i>Brevibacterium sterolicum</i> . The relationship between covalent flavinylation and redox properties. <i>Journal of Biological Chemistry</i> , <b>2001</b> , 276, 18024-30	5.4	61
8	Identification and role of ionizing functional groups at the active center of <i>Rhodotorula gracilis</i> D-amino acid oxidase. <i>FEBS Letters</i> , <b>2001</b> , 507, 323-6	3.8	12
7	Redox potentials and their pH dependence of D-amino-acid oxidase of <i>Rhodotorula gracilis</i> and <i>Trigonopsis variabilis</i> . <i>FEBS Journal</i> , <b>2000</b> , 267, 6624-32		25
6	The x-ray structure of D-amino acid oxidase at very high resolution identifies the chemical mechanism of flavin-dependent substrate dehydrogenation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2000</b> , 97, 12463-8	11.5	165
5	Role of arginine 285 in the active site of <i>Rhodotorula gracilis</i> D-amino acid oxidase. A site-directed mutagenesis study. <i>Journal of Biological Chemistry</i> , <b>2000</b> , 275, 24715-21	5.4	46
4	Studies on the reaction mechanism of <i>Rhodotorula gracilis</i> D-amino-acid oxidase. Role of the highly conserved Tyr-223 on substrate binding and catalysis. <i>Journal of Biological Chemistry</i> , <b>1999</b> , 274, 36233-40	5.4	47
3	Overexpression in <i>Escherichia coli</i> of a recombinant chimeric <i>Rhodotorula gracilis</i> d-amino acid oxidase. <i>Protein Expression and Purification</i> , <b>1998</b> , 14, 289-94	2	62
2	Cloning, sequencing and expression in <i>E. coli</i> of a D-amino acid oxidase cDNA from <i>Rhodotorula gracilis</i> active on cephalosporin C. <i>Journal of Biotechnology</i> , <b>1997</b> , 58, 115-23	3.7	36
1	Chemo-Enzymatic Deracemization Methods		195-228 3