

Gianluca Molla

List of Publications by Citations

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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 | Physiological functions of D-amino acid oxidases: from yeast to humans. <i>Cellular and Molecular Life Sciences</i> , 2007 , 64, 1373-94 | 10.3 | 267 |
| 87 | 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> , 2000 , 97, 12463-8 | 11.5 | 165 |
| 86 | pLG72 modulates intracellular D-serine levels through its interaction with D-amino acid oxidase: effect on schizophrenia susceptibility. <i>Journal of Biological Chemistry</i> , 2008 , 283, 22244-56 | 5.4 | 123 |
| 85 | Characterization of human D-amino acid oxidase. <i>FEBS Letters</i> , 2006 , 580, 2358-64 | 3.8 | 107 |
| 84 | New biotech applications from evolved D-amino acid oxidases. <i>Trends in Biotechnology</i> , 2011 , 29, 276-83 | 15.1 | 104 |
| 83 | Properties and applications of microbial D-amino acid oxidases: current state and perspectives. <i>Applied Microbiology and Biotechnology</i> , 2008 , 78, 1-16 | 5.7 | 101 |
| 82 | Yeast D-amino acid oxidase: structural basis of its catalytic properties. <i>Journal of Molecular Biology</i> , 2002 , 324, 535-46 | 6.5 | 98 |
| 81 | L-amino acid oxidase as biocatalyst: a dream too far?. <i>Applied Microbiology and Biotechnology</i> , 2013 , 97, 9323-41 | 5.7 | 88 |
| 80 | Structure-function relationships in human D-amino acid oxidase. <i>Amino Acids</i> , 2012 , 43, 1833-50 | 3.5 | 82 |
| 79 | D-amino acid oxidase inhibitors as a novel class of drugs for schizophrenia therapy. <i>Current Pharmaceutical Design</i> , 2013 , 19, 2499-511 | 3.3 | 70 |
| 78 | Cholesterol oxidase: biotechnological applications. <i>FEBS Journal</i> , 2009 , 276, 6857-70 | 5.7 | 63 |
| 77 | Evolution of an acylase active on cephalosporin C. <i>Protein Science</i> , 2005 , 14, 3064-76 | 6.3 | 63 |
| 76 | Overexpression in Escherichia coli of a recombinant chimeric Rhodotorula gracilis d-amino acid oxidase. <i>Protein Expression and Purification</i> , 1998 , 14, 289-94 | 2 | 62 |
| 75 | Cholesterol oxidase from Brevibacterium sterolicum. The relationship between covalent flavinylation and redox properties. <i>Journal of Biological Chemistry</i> , 2001 , 276, 18024-30 | 5.4 | 61 |
| 74 | Optimization of glutaryl-7-aminocephalosporanic acid acylase expression in E. coli. <i>Protein Expression and Purification</i> , 2008 , 61, 131-7 | 2 | 60 |
| 73 | Engineering the substrate specificity of D-amino-acid oxidase. <i>Journal of Biological Chemistry</i> , 2002 , 277, 27510-6 | 5.4 | 58 |
| 72 | Catalytic properties of D-amino acid oxidase in cephalosporin C bioconversion: a comparison between proteins from different sources. <i>Biotechnology Progress</i> , 2004 , 20, 467-73 | 2.8 | 57 |

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|----|--|------|----|
| 71 | Dissecting the structural determinants of the stability of cholesterol oxidase containing covalently bound flavin. <i>Journal of Biological Chemistry</i> , 2005 , 280, 22572-81 | 5.4 | 57 |
| 70 | Glyphosate resistance by engineering the flavoenzyme glycine oxidase. <i>Journal of Biological Chemistry</i> , 2009 , 284, 36415-36423 | 5.4 | 51 |
| 69 | Enzymatic Conversion of Unnatural Amino Acids by Yeast D-Amino Acid Oxidase. <i>Advanced Synthesis and Catalysis</i> , 2006 , 348, 2183-2190 | 5.6 | 51 |
| 68 | Structure-function correlation in glycine oxidase from <i>Bacillus subtilis</i> . <i>Journal of Biological Chemistry</i> , 2004 , 279, 29718-27 | 5.4 | 51 |
| 67 | O ₂ reactivity of flavoproteins: dynamic access of dioxygen to the active site and role of a H ⁺ relay system in D-amino acid oxidase. <i>Journal of Biological Chemistry</i> , 2010 , 285, 24439-46 | 5.4 | 49 |
| 66 | 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> , 1999 , 274, 36233-40 | 5.4 | 47 |
| 65 | 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> , 2000 , 275, 24715-21 | 5.4 | 46 |
| 64 | Breaking the mirror: L-Amino acid deaminase, a novel stereoselective biocatalyst. <i>Biotechnology Advances</i> , 2017 , 35, 657-668 | 17.8 | 45 |
| 63 | Effect of ligand binding on human D-amino acid oxidase: implications for the development of new drugs for schizophrenia treatment. <i>Protein Science</i> , 2010 , 19, 1500-12 | 6.3 | 41 |
| 62 | Characterization of the covalently bound anionic flavin radical in monoamine oxidase a by electron paramagnetic resonance. <i>Journal of the American Chemical Society</i> , 2007 , 129, 16091-7 | 16.4 | 41 |
| 61 | A biosensor for all D-amino acids using evolved D-amino acid oxidase. <i>Journal of Biotechnology</i> , 2008 , 135, 377-84 | 3.7 | 40 |
| 60 | Cephalosporin C acylase: dream and (or) reality. <i>Applied Microbiology and Biotechnology</i> , 2013 , 97, 2341-55 | 5.5 | 38 |
| 59 | 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> , 2008 , 283, 24738-47 | 5.4 | 38 |
| 58 | 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> , 1997 , 58, 115-23 | 3.7 | 36 |
| 57 | Overexpression of a recombinant wild-type and His-tagged <i>Bacillus subtilis</i> glycine oxidase in <i>Escherichia coli</i> . <i>FEBS Journal</i> , 2002 , 269, 1456-63 | | 36 |
| 56 | 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> , 2016 , 291, 10457-75 | 5.4 | 36 |
| 55 | Expression in <i>Escherichia coli</i> and in vitro refolding of the human protein pLG72. <i>Protein Expression and Purification</i> , 2006 , 46, 150-5 | 2 | 35 |
| 54 | Relevance of weak flavin binding in human D-amino acid oxidase. <i>Protein Science</i> , 2009 , 18, 801-10 | 6.3 | 33 |

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| 53 | Engineering the properties of D-amino acid oxidases by a rational and a directed evolution approach. <i>Current Protein and Peptide Science</i> , 2007 , 8, 600-18 | 2.8 | 31 |
| 52 | 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> , 2004 , 17, 517-25 | 1.9 | 31 |
| 51 | Production of recombinant cholesterol oxidase containing covalently bound FAD in Escherichia coli. <i>BMC Biotechnology</i> , 2010 , 10, 33 | 3.5 | 28 |
| 50 | Optimization of human D-amino acid oxidase expression in Escherichia coli. <i>Protein Expression and Purification</i> , 2009 , 68, 72-8 | 2 | 27 |
| 49 | Multistep enzyme catalysed deracemisation of 2-naphthyl alanine. <i>Biocatalysis and Biotransformation</i> , 2006 , 24, 409-413 | 2.5 | 27 |
| 48 | Kinetic mechanisms of glycine oxidase from Bacillus subtilis. <i>FEBS Journal</i> , 2003 , 270, 1474-82 | | 27 |
| 47 | Structural, kinetic, and pharmacodynamic mechanisms of D-amino acid oxidase inhibition by small molecules. <i>Journal of Medicinal Chemistry</i> , 2013 , 56, 3710-24 | 8.3 | 26 |
| 46 | Redox potentials and their pH dependence of D-amino-acid oxidase of Rhodotorula gracilis and Trigonopsis variabilis. <i>FEBS Journal</i> , 2000 , 267, 6624-32 | | 25 |
| 45 | Characterization of human DAAO variants potentially related to an increased risk of schizophrenia. <i>Biochimica Et Biophysica Acta - Molecular Basis of Disease</i> , 2013 , 1832, 400-10 | 6.9 | 24 |
| 44 | Regulation of D-amino acid oxidase expression in the yeast Rhodotorula gracilis. <i>Yeast</i> , 2003 , 20, 1061-9 | 3.4 | 24 |
| 43 | 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> , 2013 , 451, 217-26 | 3.8 | 23 |
| 42 | 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> , 2011 , 278, 4362-73 | 5.7 | 23 |
| 41 | Optimization of D-amino acid oxidase for low substrate concentrations--towards a cancer enzyme therapy. <i>FEBS Journal</i> , 2009 , 276, 4921-32 | 5.7 | 22 |
| 40 | Expression of an evolved engineered variant of a bacterial glycine oxidase leads to glyphosate resistance in alfalfa. <i>Journal of Biotechnology</i> , 2014 , 184, 201-8 | 3.7 | 21 |
| 39 | Deracemization and Stereo-inversion of α -Amino Acids by L-Amino Acid Deaminase. <i>Advanced Synthesis and Catalysis</i> , 2017 , 359, 3773-3781 | 5.6 | 21 |
| 38 | Expression in Escherichia coli of the catalytic domain of human proline oxidase. <i>Protein Expression and Purification</i> , 2012 , 82, 345-51 | 2 | 21 |
| 37 | Structural and kinetic analyses of the H121A mutant of cholesterol oxidase. <i>Biochemical Journal</i> , 2006 , 400, 13-22 | 3.8 | 21 |
| 36 | Conversion of the dimeric D-amino acid oxidase from Rhodotorula gracilis to a monomeric form. A rational mutagenesis approach. <i>FEBS Letters</i> , 2002 , 526, 43-8 | 3.8 | 21 |

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| 35 | Strategic manipulation of an industrial biocatalyst--evolution of a cephalosporin C acylase. <i>FEBS Journal</i> , 2014 , 281, 2443-55 | 5.7 | 20 |
| 34 | A thermostable L-aspartate oxidase: a new tool for biotechnological applications. <i>Applied Microbiology and Biotechnology</i> , 2013 , 97, 7285-95 | 5.7 | 19 |
| 33 | Enzymatic detection of D-amino acids. <i>Methods in Molecular Biology</i> , 2012 , 794, 273-89 | 1.4 | 19 |
| 32 | Relevance of the flavin binding to the stability and folding of engineered cholesterol oxidase containing noncovalently bound FAD. <i>Protein Science</i> , 2008 , 17, 409-19 | 6.3 | 19 |
| 31 | Structure-function relationships in human d-amino acid oxidase variants corresponding to known SNPs. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2015 , 1854, 1150-9 | 4 | 18 |
| 30 | Competitive Inhibitors Unveil Structure/Function Relationships in Human D-Amino Acid Oxidase. <i>Frontiers in Molecular Biosciences</i> , 2017 , 4, 80 | 5.6 | 17 |
| 29 | On the reaction of D-amino acid oxidase with dioxygen: O ₂ diffusion pathways and enhancement of reactivity. <i>FEBS Journal</i> , 2011 , 278, 482-92 | 5.7 | 15 |
| 28 | Novel biosensors based on optimized glycine oxidase. <i>FEBS Journal</i> , 2014 , 281, 3460-72 | 5.7 | 14 |
| 27 | Regulating levels of the neuromodulator d-serine in human brain: structural insight into pLG72 and d-amino acid oxidase interaction. <i>FEBS Journal</i> , 2016 , 283, 3353-70 | 5.7 | 12 |
| 26 | Identification and role of ionizing functional groups at the active center of <i>Rhodotorula gracilis</i> D-amino acid oxidase. <i>FEBS Letters</i> , 2001 , 507, 323-6 | 3.8 | 12 |
| 25 | Advances in Enzymatic Synthesis of D-Amino Acids. <i>International Journal of Molecular Sciences</i> , 2020 , 21, | 6.3 | 11 |
| 24 | Catalytic and redox properties of glycine oxidase from <i>Bacillus subtilis</i> . <i>Biochimie</i> , 2009 , 91, 604-12 | 4.6 | 11 |
| 23 | 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> , 2003 , 16, 1063-9 | 1.9 | 11 |
| 22 | Structure and kinetic properties of human d-aspartate oxidase, the enzyme-controlling d-aspartate levels in brain. <i>FASEB Journal</i> , 2020 , 34, 1182-1197 | 0.9 | 11 |
| 21 | In vitro evolution of an L-amino acid deaminase active on L-1-naphthylalanine. <i>Catalysis Science and Technology</i> , 2018 , 8, 5359-5367 | 5.5 | 11 |
| 20 | Investigating the role of active site residues of <i>Rhodotorula gracilis</i> D-amino acid oxidase on its substrate specificity. <i>Biochimie</i> , 2007 , 89, 360-8 | 4.6 | 10 |
| 19 | Analytical methods for the investigation of enzyme-catalyzed degradation of polyethylene terephthalate. <i>FEBS Journal</i> , 2021 , 288, 4730-4745 | 5.7 | 10 |
| 18 | D-Amino Acid Oxidase-pLG72 Interaction and D-Serine Modulation. <i>Frontiers in Molecular Biosciences</i> , 2018 , 5, 3 | 5.6 | 9 |

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| 17 | Aminoacetone oxidase from <i>Streptococcus oligofermentans</i> belongs to a new three-domain family of bacterial flavoproteins. <i>Biochemical Journal</i> , 2014 , 464, 387-99 | 3.8 | 9 |
| 16 | Activity of yeast d-amino acid oxidase on aromatic unnatural amino acids. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2008 , 50, 93-98 | | 9 |
| 15 | 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> , 2004 , 1702, 19-32 | 4 | 8 |
| 14 | Properties of l-amino acid deaminase: En route to optimize bioconversion reactions. <i>Biochimie</i> , 2019 , 158, 199-207 | 4.6 | 7 |
| 13 | Tryptophan 243 affects interprotein contacts, cofactor binding and stability in D-amino acid oxidase from <i>Rhodotorula gracilis</i> . <i>FEBS Journal</i> , 2006 , 273, 504-12 | 5.7 | 7 |
| 12 | Engineering substrate promiscuity in halophilic alcohol dehydrogenase (HvADH2) by in silico design. <i>PLoS ONE</i> , 2017 , 12, e0187482 | 3.7 | 7 |
| 11 | Recombinant human Tat-Hsp70-2: A tool for neuroprotection. <i>Protein Expression and Purification</i> , 2017 , 138, 18-24 | 2 | 6 |
| 10 | FAD binding in glycine oxidase from <i>Bacillus subtilis</i> . <i>Biochimie</i> , 2009 , 91, 1499-508 | 4.6 | 6 |
| 9 | Glycine oxidase from <i>Bacillus subtilis</i> : role of histidine 244 and methionine 261. <i>Biochimie</i> , 2007 , 89, 1372-80 | 4.8 | 6 |
| 8 | Revisitation of the α -elimination reaction of D-amino acid oxidase: new interpretation of the reaction that sparked flavoprotein dehydrogenation mechanisms. <i>Journal of Biological Chemistry</i> , 2011 , 286, 40987-98 | 5.4 | 4 |
| 7 | Biochemical characterization of mouse d-aspartate oxidase. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2020 , 1868, 140472 | 4 | 4 |
| 6 | Overexpression of a bacterial chymotrypsin: application for L-amino acid ester hydrolysis. <i>Enzyme and Microbial Technology</i> , 2011 , 49, 560-6 | 3.8 | 3 |
| 5 | Chemo-Enzymatic Deracemization Methods | | 3 |
| 4 | The role of tyrosines 223 and 238 in <i>Rhodotorula gracilis</i> d-amino acid oxidase catalysis: Interpretation of double mutations. <i>Enzyme and Microbial Technology</i> , 2006 , 38, 795-802 | 3.8 | 2 |
| 3 | 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> , 2020 , 21, | 6.3 | 2 |
| 2 | An Efficient Protein Evolution Workflow for the Improvement of Bacterial PET Hydrolyzing Enzymes.. <i>International Journal of Molecular Sciences</i> , 2021 , 23, | 6.3 | 2 |
| 1 | Human D-aspartate Oxidase: A Key Player in D-aspartate Metabolism. <i>Frontiers in Molecular Biosciences</i> , 2021 , 8, 689719 | 5.6 | 0 |