Silvia Sacchi

List of Publications by Year
in descending order

68 papers	3,612 citations	147786 31 h-index	133244 59 g-index
68 all docs	68 docs citations	68 times ranked	3334 citing authors

#	Article	IF	Citations
1	Synaptic and Extrasynaptic NMDA Receptors Are Gated by Different Endogenous Coagonists. Cell, 2012, 150, 633-646.	28.9	597
2	Physiological functions of D-amino acid oxidases: from yeast to humans. Cellular and Molecular Life Sciences, 2007, 64, 1373-1394.	5.4	319
3	Glial D-Serine Gates NMDA Receptors at Excitatory Synapses in Prefrontal Cortex. Cerebral Cortex, 2012, 22, 595-606.	2.9	154
4	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
5	Properties and applications of microbial D-amino acid oxidases: current state and perspectives. Applied Microbiology and Biotechnology, 2008, 78, 1-16.	3.6	131
6	Characterization of humand-amino acid oxidase. FEBS Letters, 2006, 580, 2358-2364.	2.8	127
7	THE FRESHWATER CYANOBACTERIUMPLANKTOTHRIXSP. FP1: MOLECULAR IDENTIFICATION AND DETECTION OF PARALYTIC SHELLFISH POISONING TOXINS. Journal of Phycology, 2000, 36, 553-562.	2.3	113
8	Identity of the NMDA receptor coagonist is synapse specific and developmentally regulated in the hippocampus. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E204-13.	7.1	111
9	Metabolism of the neuromodulator d-serine. Cellular and Molecular Life Sciences, 2010, 67, 2387-2404.	5.4	106
10	Structureâ€"function relationships in human d-amino acid oxidase. Amino Acids, 2012, 43, 1833-1850.	2.7	89
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	Co-agonists differentially tune GluN2B-NMDA receptor trafficking at hippocampal synapses. ELife, 2017, 6, .	6.0	76
14	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
15	Human D-Amino Acid Oxidase: Structure, Function, and Regulation. Frontiers in Molecular Biosciences, 2018, 5, 107.	3.5	71
16	Identity of endogenous NMDAR glycine site agonist in amygdala is determined by synaptic activity level. Nature Communications, 2013, 4, 1760.	12.8	69
17	Reduced d-serine levels in the nucleus accumbens of cocaine-treated rats hinder the induction of NMDA receptor-dependent synaptic plasticity. Brain, 2013, 136, 1216-1230.	7.6	68
18	Optimization of glutaryl-7-aminocephalosporanic acid acylase expression in E. coli. Protein Expression and Purification, 2008, 61, 131-137.	1.3	64

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19	Age-Related Changes in d-Aspartate Oxidase Promoter Methylation Control Extracellular d-Aspartate Levels and Prevent Precocious Cell Death during Brain Aging. Journal of Neuroscience, 2016, 36, 3064-3078.	3.6	56
20	Evidence for the interaction of d-amino acid oxidase with pLG72 in a glial cell line. Molecular and Cellular Neurosciences, 2011, 48, 20-28.	2.2	52
21	Decreased free d-aspartate levels are linked to enhanced d-aspartate oxidase activity in the dorsolateral prefrontal cortex of schizophrenia patients. NPJ Schizophrenia, 2017, 3, 16.	3.6	51
22	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
23	A biosensor for all d-amino acids using evolved d-amino acid oxidase. Journal of Biotechnology, 2008, 135, 377-384.	3.8	45
24	Olanzapine, but not clozapine, increases glutamate release in the prefrontal cortex of freely moving mice by inhibiting D-aspartate oxidase activity. Scientific Reports, 2017, 7, 46288.	3.3	44
25	Relevance of weak flavin binding in human <scp>D</scp>â€amino acid oxidase. Protein Science, 2009, 18, 801-810.	7.6	43
26	L-serine synthesis via the phosphorylated pathway in humans. Cellular and Molecular Life Sciences, 2020, 77, 5131-5148.	5.4	42
27	Determination of D-amino acids using a D-amino acid oxidase biosensor with spectrophotometric and potentiometric detection. Biotechnology Letters, 1998, 12, 149-153.	0.5	40
28	Expression in Escherichia coli and in vitro refolding of the human protein pLG72. Protein Expression and Purification, 2006, 46, 150-155.	1.3	37
29	Serum d-serine levels are altered in early phases of Alzheimerâ€™s disease: towards a precocious biomarker. Translational Psychiatry, 2021, 11, 77.	4.8	37
30	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
31	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
32	Proline oxidase controls proline, glutamate, and glutamine cellular concentrations in a U87 glioblastoma cell line. PLoS ONE, 2018, 13, e0196283.	2.5	33
33	D-Serine and Glycine Differentially Control Neurotransmission during Visual Cortex Critical Period. PLoS ONE, 2016, 11, e0151233.	2.5	31
34	G72 primate-specific gene: a still enigmatic element in psychiatric disorders. Cellular and Molecular Life Sciences, 2016, 73, 2029-2039.	5.4	31
35	The levels of the NMDA receptor co-agonist D-serine are reduced in the substantia nigra of MPTP-lesioned macaques and in the cerebrospinal fluid of Parkinsonâ€™s disease patients. Scientific Reports, 2019, 9, 8898.	3.3	31
36	DNA methylation landscape of the genes regulating D-serine and D-aspartate metabolism in post-mortem brain from controls and subjects with schizophrenia. Scientific Reports, 2018, 8, 10163.	3.3	29

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37	The degradation (by distinct pathways) of human <scp>d</scp>â€amino acid oxidase and its interacting partner <scp>pLG</scp>72Ââ€“Âtwo key proteins in <scp>d</scp>â€serine catabolism in the brain. FEBS Journal, 2014, 281, 708-723.	4.7	28
38	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
39	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
40	Biochemical Properties of Human D-Amino Acid Oxidase. Frontiers in Molecular Biosciences, 2017, 4, 88.	3.5	26
41	Metabolic resistance of the D-peptide RD2 developed for direct elimination of amyloid-Î² oligomers. Scientific Reports, 2019, 9, 5715.	3.3	25
42	Biochemical Properties of Human D-amino Acid Oxidase Variants and Their Potential Significance in Pathologies. Frontiers in Molecular Biosciences, 2018, 5, 55.	3.5	24
43	Free d-aspartate triggers NMDA receptor-dependent cell death in primary cortical neurons and perturbs JNK activation, Tau phosphorylation, and protein SUMOylation in the cerebral cortex of mice lacking d-aspartate oxidase activity. Experimental Neurology, 2019, 317, 51-65.	4.1	24
44	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
45	<scp>D</scp>-Serine metabolism: new insights into the modulation of <scp>D</scp>-amino acid oxidase activity. Biochemical Society Transactions, 2013, 41, 1551-1556.	3.4	20
46	Direct chromatographic methods for enantioresolution of amino acids: recent developments. Amino Acids, 2020, 52, 849-862.	2.7	19
47	Role of tyrosine 238 in the active site ofRhodotorula gracilisd-amino acid oxidase. FEBS Journal, 2002, 269, 4762-4771.	0.2	17
48	An antibody-based enzymatic therapy for cancer treatment: The selective localization of D-amino acid oxidase to EDA fibronectin. Nanomedicine: Nanotechnology, Biology, and Medicine, 2021, 36, 102424.	3.3	16
49	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
50	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
51	Dopaminergic neuromodulation of prefrontal cortex activity requires the NMDA receptor coagonist <scp>d</scp> -serine. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	14
52	Human D-aspartate Oxidase: A Key Player in D-aspartate Metabolism. Frontiers in Molecular Biosciences, 2021, 8, 689719.	3.5	13
53	High-Throughput Screening Strategy Identifies Allosteric, Covalent Human D-Amino Acid Oxidase Inhibitor. Journal of Biomolecular Screening, 2015, 20, 1218-1231.	2.6	12
54	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

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55	Biosensors for d-Amino Acid Detection. Methods in Molecular Biology, 2012, 794, 313-324.	0.9	11
56	Human d -amino acid oxidase: The inactive G183R variant. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2018, 1866, 822-830.	2.3	11
57	Novel insights into renal d-amino acid oxidase accumulation: propiverine changes DAAO localization and peroxisomal size in vivo. Archives of Toxicology, 2017, 91, 427-437.	4.2	9
58	Glycine oxidase from Bacillus subtilis: Role of Histidine 244 and Methionine 261. Biochimie, 2007, 89, 1372-1380.	2.6	8
59	Elucidating the role of the pLG72 R30K substitution in schizophrenia susceptibility. FEBS Letters, 2017, 591, 646-655.	2.8	8
60	Antimicrobial d-amino acid oxidase-derived peptides specify gut microbiota. Cellular and Molecular Life Sciences, 2021, 78, 3607-3620.	5.4	6
61	Understanding renal nuclear protein accumulation: an in vitro approach to explain an in vivo phenomenon. Archives of Toxicology, 2017, 91, 3599-3611.	4.2	5
62	Substitution of Arginine 120 in Human D-Amino Acid Oxidase Favors FAD-Binding and Nuclear Mistargeting. Frontiers in Molecular Biosciences, 2019, 6, 125.	3.5	5
63	Biochemical characterization of mouse d-aspartate oxidase. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2020, 1868, 140472.	2.3	4
64	Cellular studies of the two main isoforms of human <scp>d</scp>â€aspartate oxidase. FEBS Journal, 2021, 288, 4939-4954.	4.7	4
65	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
66	Biochemical Properties and Physiological Functions of pLG72: Twenty Years of Investigations. Biomolecules, 2022, 12, 858.	4.0	2
67	Is the primate-specific protein pLG72 affecting SOD1 functionality and superoxide formation?. Free Radical Research, 2020, 54, 419-430.	3.3	1
68	Yin and Yang in Post-Translational Modifications of Human D-Amino Acid Oxidase. Frontiers in Molecular Biosciences, 2021, 8, 684934.	3.5	1