Gloria C Ferreira

List of Publications by Year
in descending order

93 papers	2,704 citations	147801 31 h-index	206112 48 g-index
99 all docs	99 docs citations	99 times ranked	2204 citing authors

#	Article	IF	Citations
1	Mitochondrial iron detoxification is a primary function of frataxin that limits oxidative damage and preserves cell longevity. Human Molecular Genetics, 2006, 15, 467-479.	2.9	179
2	Yeast Frataxin Sequentially Chaperones and Stores Iron by Coupling Protein Assembly with Iron Oxidation. Journal of Biological Chemistry, 2003, 278, 31340-31351.	3.4	145
3	Assembly of Human Frataxin Is a Mechanism for Detoxifying Redox-Active Iron. Biochemistry, 2005, 44, 537-545.	2.5	95
4	Chelatases: distort to select?. Trends in Biochemical Sciences, 2006, 31, 135-142.	7.5	94
5	5-Aminolevulinate synthase and the first step of heme biosynthesis. Journal of Bioenergetics and Biomembranes, 1995, 27, 151-159.	2.3	93
6	Molecular enzymology of 5-Aminolevulinate synthase, the gatekeeper of heme biosynthesis. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2011, 1814, 1467-1473.	2.3	83
7	ALAS2 acts as a modifier gene in patients with congenital erythropoietic porphyria. Blood, 2011, 118, 1443-1451.	1.4	80
8	Heme biosynthesis in mammalian systems: Evidence of a schiff base linkage between the pyridoxal 5â€²â€phosphate cofactor and a lysine residue in 5â€aminolevulinate synthase. Protein Science, 1993, 2, 1959-1965.	7.6	72
9	Structure and function of ferrochelatase. Journal of Bioenergetics and Biomembranes, 1995, 27, 221-229.	2.3	70
10	Porphyrin Interactions with Wild-type and Mutant Mouse Ferrochelatase. Biochemistry, 2000, 39, 2517-2529.	2.5	64
11	Porphyrin Binding and Distortion and Substrate Specificity in the Ferrochelatase Reaction: The Role of Active Site Residues. Journal of Molecular Biology, 2008, 378, 1074-1083.	4.2	62
12	Hypoxic up-regulation of erythroid 5-aminolevulinate synthase. Blood, 2003, 101, 348-350.	1.4	58
13	A Continuous Spectrophotometric Assay for 5-Aminolevulinate Synthase That Utilizes Substrate Cycling. Analytical Biochemistry, 1995, 226, 221-224.	2.4	57
14	Pre-steady-state Reaction of 5-Aminolevulinate Synthase. Journal of Biological Chemistry, 1999, 274, 12222-12228.	3.4	52
15	Ferrochelatase. International Journal of Biochemistry and Cell Biology, 1999, 31, 995-1000.	2.8	50
16	Mouse protoporphyrinogen oxidase. Kinetic parameters and demonstration of inhibition by bilirubin. Biochemical Journal, 1988, 250, 597-603.	3.7	47
17	Unraveling the Substrateâˆ'Metal Binding Site of Ferrochelatase:â€‰ An X-ray Absorption Spectroscopic Study. Biochemistry, 2002, 41, 4809-4818.	2.5	47
18	Functional Necessity and Physicochemical Characteristics of the [2Feâˆ'2S] Cluster in Mammalian Ferrochelatase. Journal of the American Chemical Society, 1996, 118, 9892-9900.	13.7	44

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19	Aspartate-279 in Aminolevulinate Synthase Affects Enzyme Catalysis through Enhancing the Function of the Pyridoxal 5â€˜-Phosphate Cofactorâ€. Biochemistry, 1998, 37, 3509-3517.	2.5	43
20	Metal Ion Substrate Inhibition of Ferrochelatase. Journal of Biological Chemistry, 2008, 283, 23685-23691.	3.4	42
21	Lysine-313 of 5-Aminolevulinate Synthase Acts as a General Base during Formation of the Quinonoid Reaction Intermediatesâ€. Biochemistry, 1999, 38, 3711-3718.	2.5	41
22	Mutations at a Glycine Loop in Aminolevulinate Synthase Affect Pyridoxal Phosphate Cofactor Binding and Catalysisâ€. Biochemistry, 1996, 35, 14109-14117.	2.5	39
23	Molecular and functional analysis of the C-terminal region of human erythroid-specific 5-aminolevulinic synthase associated with X-linked dominant protoporphyria (XLDPP). Human Molecular Genetics, 2013, 22, 1280-1288.	2.9	39
24	Transient State Kinetic Investigation of 5-Aminolevulinate Synthase Reaction Mechanism. Journal of Biological Chemistry, 2002, 277, 44660-44669.	3.4	37
25	Aminolevulinate synthase: functionally important residues at a glycine loop, a putative pyridoxal phosphate cofactor-binding site. Biochemistry, 1995, 34, 1678-1685.	2.5	36
26	Transcriptional regulation of the murine erythroid-specific 5-aminolevulinate synthase gene. Gene, 2000, 247, 153-166.	2.2	36
27	Metallation of the Transition-state Inhibitor N-methyl Mesoporphyrin by Ferrochelatase: Implications for the Catalytic Reaction Mechanism. Journal of Molecular Biology, 2005, 352, 1081-1090.	4.2	36
28	Phosphate transport in mitochondria: Past accomplishments, present problems, and future challenges. Journal of Bioenergetics and Biomembranes, 1993, 25, 483-492.	2.3	35
29	Active Site of 5-Aminolevulinate Synthase Resides at the Subunit Interface. Evidence fromin VivoHeterodimer Formationâ€. Biochemistry, 1996, 35, 8934-8941.	2.5	34
30	Binding of Protoporphyrin IX and Metal Derivatives to the Active Site of Wild-Type Mouse Ferrochelatase at Low Porphyrin-to-Protein Ratiosâ€. Biochemistry, 2002, 41, 8253-8262.	2.5	33
31	Transient Kinetic Studies Support Refinements to the Chemical and Kinetic Mechanisms of Aminolevulinate Synthase*. Journal of Biological Chemistry, 2007, 282, 23025-23035.	3.4	33
32	Role of Arginine 439 in Substrate Binding of 5-Aminolevulinate Synthaseâ€. Biochemistry, 1998, 37, 1478-1484.	2.5	30
33	The Conserved Active-Site Loop Residues of Ferrochelatase Induce Porphyrin Conformational Changes Necessary for Catalysisâ€. Biochemistry, 2006, 45, 2904-2912.	2.5	30
34	Heme biosynthesis: Biochemistry, molecular biology, and relationship to disease. Journal of Bioenergetics and Biomembranes, 1995, 27, 147-150.	2.3	29
35	Characterization of the Iron-binding Site in Mammalian Ferrochelatase by Kinetic and MÃ¶ssbauer Methods. Journal of Biological Chemistry, 1995, 270, 26352-26357.	3.4	29
36	Aminolevulinate synthase: Lysine 313 is not essential for binding the pyridoxal phosphate cofactor but is essential for catalysis. Protein Science, 1995, 4, 1001-1006.	7.6	28

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37	Targeting the Active Site Gate to Yield Hyperactive Variants of 5-Aminolevulinate Synthase. Journal of Biological Chemistry, 2010, 285, 13704-13711.	3.4	27
38	Circular Permutation of 5-Aminolevulinate Synthase. Journal of Biological Chemistry, 2001, 276, 19141-19149.	3.4	26
39	The First Structure from the SOUL/HBP Family of Heme-binding Proteins, Murine P22HBP. Journal of Biological Chemistry, 2006, 281, 31553-31561.	3.4	26
40	The solution structure and heme binding of the presequence of murine 5-aminolevulinate synthase. FEBS Letters, 2001, 505, 325-331.	2.8	25
41	5-Aminolevulinate synthase catalysis: The catcher in heme biosynthesis. Molecular Genetics and Metabolism, 2019, 128, 178-189.	1.1	24
42	The role of tyrosine 121 in cofactor binding of 5â€aminolevulinate synthase. Protein Science, 1998, 7, 1208-1213.	7.6	23
43	Conversion of 5-aminolevulinate synthase into a more active enzyme by linking the two subunits: Spectroscopic and kinetic properties. Protein Science, 2005, 14, 1190-1200.	7.6	23
44	Supraphysiological concentrations of 5-aminolevulinic acid dimerize in solution to produce superoxide radical anions via a protonated dihydropyrazine intermediate. Archives of Biochemistry and Biophysics, 2005, 437, 128-137.	3.0	22
45	The Structure of the Complex between Yeast Frataxin and Ferrochelatase. Journal of Biological Chemistry, 2016, 291, 11887-11898.	3.4	22
46	Probing the Active Site Loop Motif of Murine Ferrochelatase by Random Mutagenesis. Journal of Biological Chemistry, 2004, 279, 19977-19986.	3.4	20
47	Unstable Reaction Intermediates and Hysteresis during the Catalytic Cycle of 5-Aminolevulinate Synthase. Journal of Biological Chemistry, 2014, 289, 22915-22925.	3.4	20
48	Aminolaevulinic acid synthase of <i>Rhodobacter capsulatus</i>: high-resolution kinetic investigation of the structural basis for substrate binding and catalysis. Biochemical Journal, 2013, 451, 205-216.	3.7	19
49	Substitution of murine ferrochelatase glutamate-287 with glutamine or alanine leads to porphyrin substrate-bound variants. Biochemical Journal, 2001, 356, 217-222.	3.7	18
50	Ferrochelatase: the convergence of the porphyrin biosynthesis and iron transport pathways. Journal of Porphyrins and Phthalocyanines, 2011, 15, 350-356.	0.8	18
51	Human Erythroid 5-Aminolevulinate Synthase Mutations Associated with X-Linked Protoporphyria Disrupt the Conformational Equilibrium and Enhance Product Release. Biochemistry, 2015, 54, 5617-5631.	2.5	18
52	Chromosomal localization of genes required for the terminal steps of oxidative metabolism: ? and ? subunits of ATP synthase and the phosphate carrier. Human Genetics, 1994, 93, 600-2.	3.8	17
53	Modulation of inhibition of ferrochelatase by N-methylprotoporphyrin. Biochemical Journal, 2006, 399, 21-28.	3.7	17
54	Expression of Murine 5-Aminolevulinate Synthase Variants Causes Protoporphyrin IX Accumulation and Light-Induced Mammalian Cell Death. PLoS ONE, 2014, 9, e93078.	2.5	17

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55	Catalytically active alkaline molten globular enzyme: Effect of pH and temperature on the structural integrity of 5-aminolevulinate synthase. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2014, 1844, 2145-2154.	2.3	16
56	Ferrochelatase Binds the Iron-Responsive Element Present in the Erythroid 5-Aminolevulinate Synthase mRNA. Biochemical and Biophysical Research Communications, 1995, 214, 875-878.	2.1	15
57	Nickel(II) Chelatase Variants Directly Evolved from Murine Ferrochelatase: Porphyrin Distortion and Kinetic Mechanism. Biochemistry, 2011, 50, 1535-1544.	2.5	15
58	Histidine 282 in 5-Aminolevulinate Synthase Affects Substrate Binding and Catalysis. Biochemistry, 2007, 46, 5972-5981.	2.5	14
59	Substitution of murine ferrochelatase glutamate-287 with glutamine or alanine leads to porphyrin substrate-bound variants. Biochemical Journal, 2001, 356, 217.	3.7	14
60	A continuous anaerobic fluorimetric assay for ferrochelatase by monitoring porphyrin disappearance. Analytical Biochemistry, 2003, 318, 18-24.	2.4	13
61	Identification and Characterization of an Inhibitory Metal Ion-binding Site in Ferrochelatase. Journal of Biological Chemistry, 2010, 285, 41836-41842.	3.4	13
62	Resonance Raman spectroscopic examination of ferrochelatase-induced porphyrin distortion. Journal of Porphyrins and Phthalocyanines, 2011, 15, 357-363.	0.8	13
63	Argâ€85 and Thrâ€430 in murine 5â€aminolevulinate synthase coordinate acylâ€CoAâ€binding and contribute to substrate specificity. Protein Science, 2009, 18, 1847-1859.	7.6	12
64	Isoniazid inhibits human erythroid 5-aminolevulinate synthase: Molecular mechanism and tolerance study with four X-linked protoporphyria patients. Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2017, 1863, 428-439.	3.8	12
65	Circular Permutation of 5-Aminolevulinate Synthase. Journal of Biological Chemistry, 2003, 278, 27945-27955.	3.4	11
66	Porphyrin-substrate binding to murine ferrochelatase: effect on the thermal stability of the enzyme. Biochemical Journal, 2005, 386, 599-605.	3.7	11
67	Serine 254 Enhances an Induced Fit Mechanism in Murine 5-Aminolevulinate Synthase. Journal of Biological Chemistry, 2010, 285, 3351-3359.	3.4	11
68	Iron Hack - A symposium/hackathon focused on porphyrias, Friedreichâ€™s ataxia, and other rare iron-related diseases. F1000Research, 2019, 8, 1135.	1.6	11
69	The SOUL family of heme-binding proteins: Structure and function 15Âyears later. Coordination Chemistry Reviews, 2021, 448, 214189.	18.8	9
70	The First Structure from the SOUL/HBP Family of Heme-binding Proteins, Murine P22HBP. Journal of Biological Chemistry, 2006, 281, 31553-31561.	3.4	9
71	Metal ion coordination sites in ferrochelatase. Coordination Chemistry Reviews, 2022, 460, 214464.	18.8	8
72	Intramembranous particles are clustered on microvillus membrane vesicles. Biochimica Et Biophysica Acta - Biomembranes, 1985, 816, 131-141.	2.6	7

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73	Lysine-313 of 5-Aminolevulinate Synthase Acts as a General Base during Formation of the Quinonoid Reaction Intermediates. Biochemistry, 1999, 38, 12526-12526.	2.5	7
74	Functional asymmetry for the active sites of linked 5-aminolevulinate synthase and 8-amino-7-oxononanoate synthase. Archives of Biochemistry and Biophysics, 2011, 511, 107-117.	3.0	7
75	Toward Heme: 5-Aminolevulinate Synthase and Initiation of Porphyrin Synthesis. Handbook of Porphyrin Science, 2013, , 1-78.	0.8	7
76	Murine erythroid 5-aminolevulinate synthase: Truncation of a disordered N-terminal extension is not detrimental for catalysis. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2016, 1864, 441-452.	2.3	7
77	Anti-Correlation between the Dynamics of the Active Site Loop and C-Terminal Tail in Relation to the Homodimer Asymmetry of the Mouse Erythroid 5-Aminolevulinate Synthase. International Journal of Molecular Sciences, 2018, 19, 1899.	4.1	7
78	Murine erythroid 5â€aminolevulinate synthase: Adenosylâ€binding site Lys221 modulates substrate binding and catalysis. FEBS Open Bio, 2015, 5, 824-831.	2.3	6
79	1H, 15N and 13C Resonance Assignments of the Heme-binding Protein Murine p22HBP. Journal of Biomolecular NMR, 2005, 32, 338-338.	2.8	5
80	Asn-150 of Murine Erythroid 5-Aminolevulinate Synthase Modulates the Catalytic Balance between the Rates of the Reversible Reaction. Journal of Biological Chemistry, 2015, 290, 30750-30761.	3.4	5
81	Ferrochelatase Ï€-helix: Implications from examining the role of the conserved Ï€-helix glutamates in porphyrin metalation and product release. Archives of Biochemistry and Biophysics, 2018, 644, 37-46.	3.0	4
82	Molecular dynamics analysis of the structural and dynamic properties of the functionally enhanced hepta-variant of mouse 5-aminolevulinate synthase. Journal of Biomolecular Structure and Dynamics, 2018, 36, 152-165.	3.5	4
83	The Ultimate Step of Heme Biosynthesis: Orchestration Between Iron Trafficking and Porphyrin Synthesis. Handbook of Porphyrin Science, 2013, , 129-189.	0.8	2
84	Macromolecular crowders and osmolytes modulate the structural and catalytic properties of alkaline molten globular 5-aminolevulinate synthase. RSC Advances, 2016, 6, 114541-114552.	3.6	2
85	The conserved active site histidine-glutamate pair of ferrochelatase coordinately catalyzes porphyrin metalation. Journal of Porphyrins and Phthalocyanines, 2016, 20, 556-569.	0.8	2
86	The unfolding pathways of the native and molten globule states of 5-aminolevulinate synthase. Biochemical and Biophysical Research Communications, 2016, 480, 321-327.	2.1	2
87	An Extended C-Terminus, the Possible Culprit for Differential Regulation of 5-Aminolevulinate Synthase Isoforms. Frontiers in Molecular Biosciences, 0, 9, .	3.5	2
88	Mutations in the iron-sulfur cluster ligands of the human ferrochelatase lead to erythropoietic protoporphyria. Blood, 2000, 96, 1545-1549.	1.4	1
89	Handbook of Porphyrin Science (Volume 29). Handbook of Porphyrin Science, 2013, , .	0.8	1
90	Circular permutation of 5-aminolevulinate synthase as a tool to evaluate folding, structure and function. Cellular and Molecular Biology, 2002, 48, 11-6.	0.9	1

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91	Cofactors and Coenzymes | Heme Synthesis. , 2021, , 356-362.		0
92	5-Aminolevulinate Synthase: Pre-Steady State Reaction and Functional Role of Specific Active Site Residues. , 2000, , 257-263.		0
93	Uncovering host-microbiome interactions in global systems with collaborative programming: a novel approach integrating social and data sciences. F1000Research, 0, 9, 1478.	1.6	0