Carlos T Moraes

List of Publications by Year
in descending order

108 papers	11,442 citations	31976 53 h-index	29157 104 g-index
111 all docs	111 docs citations	111 times ranked	10600 citing authors

#	Article	IF	Citations
1	Glycolytic oligodendrocytes maintain myelin and long-term axonal integrity. Nature, 2012, 485, 517-521.	27.8	1,120
2	Mitochondrial DNA Deletions in Progressive External Ophthalmoplegia and Kearns-Sayre Syndrome. New England Journal of Medicine, 1989, 320, 1293-1299.	27.0	1,012
3	Deletions of mitochondrial DNA in Kearnsâ€Sayre syndrome. Neurology, 1988, 38, 1339-1339.	1.1	624
4	A direct repeat is a hotspot for large-scale deletion of human mitochondrial DNA. Science, 1989, 244, 346-349.	12.6	566
5	Deletions of mitochondrial DNA in Kearnsâ€Sayre syndrome. Neurology, 1988, 38, 1339-1339.	1.1	445
6	Respiratory Complex III Is Required to Maintain Complex I in Mammalian Mitochondria. Molecular Cell, 2004, 13, 805-815.	9.7	402
7	Specific elimination of mutant mitochondrial genomes in patient-derived cells by mitoTALENs. Nature Medicine, 2013, 19, 1111-1113.	30.7	350
8	Mitochondrial Encephalomyopathies. Archives of Neurology, 1993, 50, 1197-1208.	4.5	346
9	Mitochondrial <scp>DNA</scp> damage and reactive oxygen species in neurodegenerative disease. FEBS Letters, 2018, 592, 728-742.	2.8	289
10	What regulates mitochondrial DNA copy number in animal cells?. Trends in Genetics, 2001, 17, 199-205.	6.7	268
11	Selective Elimination of Mitochondrial Mutations in the Germline by Genome Editing. Cell, 2015, 161, 459-469.	28.9	245
12	Mitochondrial Genome Engineering: The Revolution May Not Be CRISPR-Ized. Trends in Genetics, 2018, 34, 101-110.	6.7	230
13	Atypical clinical presentations associated with the MELAS mutation at position 3243 of human mitochondrial DNA. Neuromuscular Disorders, 1993, 3, 43-50.	0.6	219
14	The CoQH2/CoQ Ratio Serves as a Sensor of Respiratory Chain Efficiency. Cell Reports, 2016, 15, 197-209.	6.4	215
15	MitoTALEN reduces mutant mtDNA load and restores tRNAAla levels in a mouse model of heteroplasmic mtDNA mutation. Nature Medicine, 2018, 24, 1696-1700.	30.7	187
16	Mechanisms of formation and accumulation of mitochondrial DNA deletions in aging neurons. Human Molecular Genetics, 2009, 18, 1028-1036.	2.9	162
17	Manipulating mitochondrial DNA heteroplasmy by a mitochondrially targeted restriction endonuclease. Human Molecular Genetics, 2001, 10, 3093-3099.	2.9	160
18	Cytochrome c oxidase deficiency in neurons decreases both oxidative stress and amyloid formation in a mouse model of Alzheimer's disease. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 14163-14168.	7.1	160

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19	Mechanisms linking mtDNA damage and aging. Free Radical Biology and Medicine, 2015, 85, 250-258.	2.9	152
20	MitoTALEN: A General Approach to Reduce Mutant mtDNA Loads and Restore Oxidative Phosphorylation Function in Mitochondrial Diseases. Molecular Therapy, 2015, 23, 1592-1599.	8.2	149
21	Double-strand breaks of mouse muscle mtDNA promote large deletions similar to multiple mtDNA deletions in humans. Human Molecular Genetics, 2005, 14, 893-902.	2.9	147
22	Mice lacking COX10 in skeletal muscle recapitulate the phenotype of progressive mitochondrial myopathies associated with cytochrome c oxidase deficiency. Human Molecular Genetics, 2005, 14, 2737-2748.	2.9	145
23	Rapid directional shift of mitochondrial DNA heteroplasmy in animal tissues by a mitochondrially targeted restriction endonuclease. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 14392-14397.	7.1	143
24	Human mitochondrial DNA with large deletions repopulates organelles faster than full-length genomes under relaxed copy number control. Nucleic Acids Research, 2002, 30, 4626-4633.	14.5	139
25	An out-of-frame cytochromeb gene deletion from a patient with parkinsonism is associated with impaired complex III assembly and an increase in free radical production. Annals of Neurology, 2000, 48, 774-781.	5.3	126
26	Intra- and inter-molecular recombination of mitochondrial DNA after in vivo induction of multiple double-strand breaks. Nucleic Acids Research, 2009, 37, 4218-4226.	14.5	106
27	Respiratory supercomplexes act as a platform for complex <scp>III</scp> â€mediated maturation of human mitochondrial complexes I and <scp>IV</scp>. EMBO Journal, 2020, 39, e102817.	7.8	102
28	In vivo methylation of mtDNA reveals the dynamics of proteinâ€“mtDNA interactions. Nucleic Acids Research, 2009, 37, 6701-6715.	14.5	100
29	Striatal Dysfunctions Associated with Mitochondrial DNA Damage in Dopaminergic Neurons in a Mouse Model of Parkinson's Disease. Journal of Neuroscience, 2011, 31, 17649-17658.	3.6	100
30	The Striatum Is Highly Susceptible to Mitochondrial Oxidative Phosphorylation Dysfunctions. Journal of Neuroscience, 2011, 31, 9895-9904.	3.6	99
31	Heteroplasmy of mitochondrial genomes in clonal cultures from patients with Kearns-Sayre syndrome. Biochemical and Biophysical Research Communications, 1989, 160, 765-771.	2.1	98
32	Respiration-Deficient Astrocytes Survive As Glycolytic CellsIn Vivo. Journal of Neuroscience, 2017, 37, 4231-4242.	3.6	97
33	Limitations of Allotopic Expression of Mitochondrial Genes in Mammalian Cells. Genetics, 2003, 165, 707-720.	2.9	96
34	Organ-specific shifts in mtDNA heteroplasmy following systemic delivery of a mitochondria-targeted restriction endonuclease. Gene Therapy, 2010, 17, 713-720.	4.5	93
35	Enhanced Transcriptional Activity and Mitochondrial Localization of STAT3 Co-induce Axon Regrowth in the Adult Central Nervous System. Cell Reports, 2016, 15, 398-410.	6.4	91
36	The mitochondrial DNA polymerase gamma degrades linear DNA fragments precluding the formation of deletions. Nature Communications, 2018, 9, 2491.	12.8	91

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37	The mtDNA Mutation Spectrum of the Progeroid Polg Mutator Mouse Includes Abundant Control Region Multimers. Cell Metabolism, 2010, 12, 675-682.	16.2	86
38	Modulating mtDNA heteroplasmy by mitochondria-targeted restriction endonucleases in a â€˜differential multiple cleavage-siteâ€™ model. Gene Therapy, 2007, 14, 1309-1318.	4.5	84
39	A defect in the mitochondrial complex III, but not complex IV, triggers early ROS-dependent damage in defined brain regions. Human Molecular Genetics, 2012, 21, 5066-5077.	2.9	81
40	Mechanisms of Human Mitochondrial DNA Maintenance: The Determining Role of Primary Sequence and Length over Function. Molecular Biology of the Cell, 1999, 10, 3345-3356.	2.1	75
41	Manipulation of mtDNA heteroplasmy in all striated muscles of newborn mice by AAV9-mediated delivery of a mitochondria-targeted restriction endonuclease. Gene Therapy, 2012, 19, 1101-1106.	4.5	71
42	Somatic mtDNA Mutation Spectra in the Aging Human Putamen. PLoS Genetics, 2013, 9, e1003990.	3.5	69
43	ATAD3 controls mitochondrial cristae structure, influencing mtDNA replication and cholesterol levels in muscle. Journal of Cell Science, 2018, 131, .	2.0	68
44	Mutations of cytochrome c identified in patients with thrombocytopenia THC4 affect both apoptosis and cellular bioenergetics. Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2014, 1842, 269-274.	3.8	65
45	Impaired mitophagy links mitochondrial disease to epithelial stress in methylmalonyl-CoA mutase deficiency. Nature Communications, 2020, 11, 970.	12.8	65
46	Mitochondrial genome changes and neurodegenerative diseases. Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2014, 1842, 1198-1207.	3.8	64
47	NO control of mitochondrial function in normal and transformed cells. Biochimica Et Biophysica Acta - Bioenergetics, 2017, 1858, 573-581.	1.0	63
48	mitoTevâ€TALE: a monomeric DNA editing enzyme toÂreduce mutant mitochondrial DNA levels. EMBO Molecular Medicine, 2018, 10, .	6.9	62
49	Mechanisms of Mitochondrial DNA Deletion Formation. Trends in Genetics, 2019, 35, 235-244.	6.7	62
50	Lack of Parkin Anticipates the Phenotype and Affects Mitochondrial Morphology and mtDNA Levels in a Mouse Model of Parkinson's Disease. Journal of Neuroscience, 2018, 38, 1042-1053.	3.6	58
51	An out-of-frame cytochrome b gene deletion from a patient with parkinsonism is associated with impaired complex III assembly and an increase in free radical production. Annals of Neurology, 2000, 48, 774-81.	5.3	58
52	Suppression of a mitochondrial tRNA gene mutation phenotype associated with changes in the nuclear background. Human Molecular Genetics, 1999, 8, 1117-1124.	2.9	57
53	Pioglitazone ameliorates the phenotype of a novel Parkinsonâ€™s disease mouse model by reducing neuroinflammation. Molecular Neurodegeneration, 2016, 11, 25.	10.8	57
54	Overexpression of <scp>PGC</scp>â€1Î± in aging muscle enhances a subset of youngâ€like molecular patterns. Aging Cell, 2018, 17, e12707.	6.7	57

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55	Phosphorylation of Cytochrome c Threonine 28 Regulates Electron Transport Chain Activity in Kidney. Journal of Biological Chemistry, 2017, 292, 64-79.	3.4	55
56	Mitochondrial <scp>DNA</scp> heteroplasmy in disease and targeted nucleaseâ€based therapeutic approaches. EMBO Reports, 2020, 21, e49612.	4.5	54
57	Techniques and Pitfalls in the Detection of Pathogenic Mitochondrial DNA Mutations. Journal of Molecular Diagnostics, 2003, 5, 197-208.	2.8	52
58	Identification of a mutation in the mitochondrial tRNACys gene associated with mitochondrial encephalopathy. Human Mutation, 1996, 7, 158-163.	2.5	51
59	Photobiomodulation enhancement of cell proliferation at 660â€¯nm does not require cytochrome c oxidase. Journal of Photochemistry and Photobiology B: Biology, 2019, 194, 71-75.	3.8	51
60	Defects in the biosynthesis of mitochondrial heme c and heme a in yeast and mammals. Biochimica Et Biophysica Acta - Bioenergetics, 2004, 1659, 153-159.	1.0	47
61	SCO2 mutations cause early-onset axonal Charcot-Marie-Tooth disease associated with cellular copper deficiency. Brain, 2018, 141, 662-672.	7.6	46
62	Mitochondrial respiration controls neoangiogenesis during wound healing and tumour growth. Nature Communications, 2020, 11, 3653.	12.8	46
63	Transient mitochondrial DNA double strand breaks in mice cause accelerated aging phenotypes in a ROS-dependent but p53/p21-independent manner. Cell Death and Differentiation, 2017, 24, 288-299.	11.2	43
64	Pathophysiology and fate of hepatocytes in a mouse model of mitochondrial hepatopathies. Gut, 2008, 57, 232-242.	12.1	42
65	Mitochondrial targeted meganuclease as a platform to eliminate mutant mtDNA in vivo. Nature Communications, 2021, 12, 3210.	12.8	42
66	Regulation of Respiration and Apoptosis by Cytochrome c Threonine 58 Phosphorylation. Scientific Reports, 2019, 9, 15815.	3.3	39
67	Mitochondrial DNA damage in a mouse model of Alzheimer's disease decreases amyloid beta plaque formation. Neurobiology of Aging, 2013, 34, 2399-2407.	3.1	38
68	The Use of Mitochondria-Targeted Endonucleases to Manipulate mtDNA. Methods in Enzymology, 2014, 547, 373-397.	1.0	37
69	The Mitochondrial Metallochaperone SCO1 Is Required to Sustain Expression of the High-Affinity Copper Transporter CTR1 and Preserve Copper Homeostasis. Cell Reports, 2015, 10, 933-943.	6.4	37
70	Mitochondrial DNA Double-Strand Breaks in Oligodendrocytes Cause Demyelination, Axonal Injury, and CNS Inflammation. Journal of Neuroscience, 2017, 37, 10185-10199.	3.6	34
71	ATAD3A has a scaffolding role regulating mitochondria inner membrane structure and protein assembly. Cell Reports, 2021, 37, 110139.	6.4	34
72	Partial complex I deficiency due to the CNS conditional ablation of Ndufa5 results in a mild chronic encephalopathy but no increase in oxidative damage. Human Molecular Genetics, 2014, 23, 1399-1412.	2.9	33

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73	Phenotype-genotype correlations in skeletal muscle of patients with mtDNA deletions. Muscle and Nerve, 1995, 18, S150-S153.	2.2	32
74	Nuclear-Mitochondrial Interactions. Biomolecules, 2022, 12, 427.	4.0	30
75	Myopathy reversion in mice after restauration of mitochondrial complex I. EMBO Molecular Medicine, 2020, 12, e10674.	6.9	29
76	Sustained AMPK activation improves muscle function in a mitochondrial myopathy mouse model by promoting muscle fiber regeneration. Human Molecular Genetics, 2016, 25, 3178-3191.	2.9	23
77	A magic bullet to specifically eliminate mutated mitochondrial genomes from patients' cells. EMBO Molecular Medicine, 2014, 6, 434-435.	6.9	22
78	Current strategies towards therapeutic manipulation of mtDNA heteroplasmy. Frontiers in Bioscience - Landmark, 2017, 22, 991-1010.	3.0	22
79	Mitochondrial genome engineering coming-of-age. Trends in Genetics, 2022, 38, 869-880.	6.7	20
80	Biallelic loss-of-function variations in PRDX3 cause cerebellar ataxia. Brain, 2021, 144, 1467-1481.	7.6	18
81	Simultaneous Transfer of Mitochondrial DNA and Single Chromosomes in Somatic Cells: A Novel Approach for the Study of Defects in Nuclear-Mitochondrial Communication. Human Molecular Genetics, 1998, 7, 1801-1808.	2.9	17
82	Mitochondrial DNA structure and function. International Review of Neurobiology, 2002, 53, 3-23.	2.0	17
83	DNAâ€editing enzymes as potential treatments for heteroplasmic mtDNA diseases. Journal of Internal Medicine, 2020, 287, 685-697.	6.0	16
84	Mitochondrial methionyl N-formylation affects steady-state levels of oxidative phosphorylation complexes and their organization into supercomplexes. Journal of Biological Chemistry, 2018, 293, 15021-15032.	3.4	15
85	Manipulation of mitochondrial genes and mtDNA heteroplasmy. Methods in Cell Biology, 2020, 155, 441-487.	1.1	15
86	A helicase is born. Nature Genetics, 2001, 28, 200-201.	21.4	14
87	Nitric Oxide Synthesis Is Increased in Cybrid Cells with m.3243A>G Mutation. International Journal of Molecular Sciences, 2013, 14, 394-410.	4.1	14
88	Manipulating mitochondrial genomes in the clinic: playing by different rules. Trends in Cell Biology, 2014, 24, 209-211.	7.9	12
89	Ablation of Cytochrome c in Adult Forebrain Neurons Impairs Oxidative Phosphorylation Without Detectable Apoptosis. Molecular Neurobiology, 2019, 56, 3722-3735.	4.0	9
90	Metformin delays neurological symptom onset in a mouse model of neuronal complex I deficiency. JCI Insight, 2020, 5, .	5.0	8

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91	Treatment with ROS detoxifying gold quantum clusters alleviates the functional decline in a mouse model of Friedreich ataxia. Science Translational Medicine, 2021, 13, .	12.4	7
92	Mitochondrial DNA Base Editing: Good Editing Things Still Come in Small Packages. Molecular Cell, 2020, 79, 708-709.	9.7	6
93	L-Arginine Reduces Nitro-Oxidative Stress in Cultured Cells with Mitochondrial Deficiency. Nutrients, 2021, 13, 534.	4.1	6
94	Cybrid technology. Methods in Cell Biology, 2020, 155, 415-439.	1.1	5
95	Making the most of what you've got: Optimizing residual OXPHOS function in mitochondrial diseases. EMBO Molecular Medicine, 2009, 1, 357-359.	6.9	3
96	Translational research in primary mitochondrial diseases: Challenges and opportunities. Mitochondrion, 2013, 13, 945-952.	3.4	3
97	Adrenoleukodystrophy and the mitochondrial connection: clues for supplementing Lorenzoâ€™s oil. Brain, 2013, 136, 2339-2341.	7.6	3
98	Genetics: Segregation of Mitochondrial Genomes inÂthe Germline. Current Biology, 2019, 29, R746-R748.	3.9	3
99	Image-Based Analysis of Mitochondrial Area and Counting from Adult Mouse Dopaminergic Neurites. Bio-protocol, 2018, 8, e2471.	0.4	3
100	Bcl-2 Suppresses Oxidative Phosphorylation Defects Caused by Mitochondrial DNA Mutations. Scientific World Journal, The, 2001, 1, 39-39.	2.1	2
101	An outâ€ofâ€frame cytochrome b gene deletion from a patient with parkinsonism is associated with impaired complex III assembly and an increase in free radical production. Annals of Neurology, 2000, 48, 774-781.	5.3	2
102	Cre recombinase activity is inhibited in vivo but not ex vivo by a mutation in the asymmetric spacer region of the distal lox<scp>P</scp> site. Genesis, 2015, 53, 695-700.	1.6	1
103	Sorting mtDNA Speciesâ€”the Role of nDNA-mtDNA Co-evolution. Cell Metabolism, 2019, 30, 1002-1004.	16.2	1
104	MitoTALEN reduces mutant mtDNA load and restores tRNAAla levels in a mouse model of heteroplasmic mtDNA mutation. , 0, .		1
105	The role of PGCâ€1 coactivators in aging skeletal muscle and heart. IUBMB Life, 2012, 64, spcone.	3.4	0
106	MitoTALENs for mtDNA editing. , 2020, , 481-498.		0
107	Enhanced glycolysis and GSK3 inactivation promote brain metabolic adaptations following neuronal mitochondrial stress. Human Molecular Genetics, 2021, , .	2.9	0
108	Inhibition of Akt Increases the Sensitivity of Acute Lymphoblastic Leukemia (ALL) to the Glycolytic Inhibitor 2-Deoxy-D-Glucose (2-DG). Blood, 2010, 116, 3254-3254.	1.4	0