Robert N Lightowlers

List of Publications by Year
in descending order

57 papers	6,860 citations	136950 32 h-index	144013 57 g-index
60 all docs	60 docs citations	60 times ranked	8063 citing authors

#	Article	IF	Citations
1	Reanalysis and revision of the Cambridge reference sequence for human mitochondrial DNA. Nature Genetics, 1999, 23, 147-147.	21.4	2,800
2	Mammalian mitochondrial genetics: heredity, heteroplasmy and disease. Trends in Genetics, 1997, 13, 450-455.	6.7	415
3	Role of mitochondrial DNA mutations in human aging: Implications for the central nervous system and muscle. Annals of Neurology, 1998, 43, 217-223.	5.3	280
4	Selective inhibition of mutant human mitochondrial DNA replication in vitro by peptide nucleic acids. Nature Genetics, 1997, 15, 212-215.	21.4	252
5	Mutations causing mitochondrial disease: What is new and what challenges remain?. Science, 2015, 349, 1494-1499.	12.6	251
6	Mitochondrial Diseases: Hope for the Future. Cell, 2020, 181, 168-188.	28.9	243
7	GRSF1 Regulates RNA Processing in Mitochondrial RNA Granules. Cell Metabolism, 2013, 17, 399-410.	16.2	190
8	Human mitochondrial mRNAsâ€"like members of all families, similar but different. Biochimica Et Biophysica Acta - Bioenergetics, 2010, 1797, 1081-1085.	1.0	173
9	A functional peptidyl-tRNA hydrolase, ICT1, has been recruited into the human mitochondrial ribosome. EMBO Journal, 2010, 29, 1116-1125.	7.8	167
10	Hungry Codons Promote Frameshifting in Human Mitochondrial Ribosomes. Science, 2010, 327, 301-301.	12.6	144
11	Reversal of a mitochondrial DNA defect in human skeletal muscle. Nature Genetics, 1997, 16, 222-224.	21.4	137
12	Human ERAL1 is a mitochondrial RNA chaperone involved in the assembly of the 28S small mitochondrial ribosomal subunit. Biochemical Journal, 2010, 430, 551-558.	3.7	114
13	mtRF1a Is a Human Mitochondrial Translation Release Factor Decoding the Major Termination Codons UAA and UAG. Molecular Cell, 2007, 27, 745-757.	9.7	112
14	The process of mammalian mitochondrial protein synthesis. Cell and Tissue Research, 2017, 367, 5-20.	2.9	98
15	Investigation of a pathogenic mtDNA microdeletion reveals a translation-dependent deadenylation decay pathway in human mitochondria. Human Molecular Genetics, 2003, 12, 2341-2348.	2.9	93
16	Molecular analysis of cytochromec Oxidase deficiency in Leigh's syndrome. Annals of Neurology, 1997, 41, 268-270.	5.3	87
17	The Pseudouridine Synthase RPUSD4 Is an Essential Component of Mitochondrial RNA Granules. Journal of Biological Chemistry, 2017, 292, 4519-4532.	3.4	79
18	Overexpression of human mitochondrial valyl tRNA synthetase can partially restore levels of cognate mt-tRNAVal carrying the pathogenic C25U mutation. Nucleic Acids Research, 2008, 36, 3065-3074.	14.5	74

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19	Human mitochondrial ribosomes can switch their structural RNA composition. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 12198-12201.	7.1	64
20	A human mitochondrial poly(A) polymerase mutation reveals the complexities of post-transcriptional mitochondrial gene expression. Human Molecular Genetics, 2014, 23, 6345-6355.	2.9	63
21	Treatment of mitochondrial disease. Journal of Bioenergetics and Biomembranes, 1997, 29, 195-205.	2.3	59
22	Mitochondrial transplantationâ€"a possible therapeutic for mitochondrial dysfunction?. EMBO Reports, 2020, 21, e50964.	4.5	59
23	Biallelic C1QBP Mutations Cause Severe Neonatal-, Childhood-, or Later-Onset Cardiomyopathy Associated with Combined Respiratory-Chain Deficiencies. American Journal of Human Genetics, 2017, 101, 525-538.	6.2	58
24	Human pentatricopeptide proteins. RNA Biology, 2013, 10, 1433-1438.	3.1	56
25	Mitochondrial protein synthesis: Figuring the fundamentals, complexities and complications, of mammalian mitochondrial translation. FEBS Letters, 2014, 588, 2496-2503.	2.8	55
26	REXO2 Is an Oligoribonuclease Active in Human Mitochondria. PLoS ONE, 2013, 8, e64670.	2.5	49
27	Targeting of the cytosolic poly(A) binding protein PABPC1 to mitochondria causes mitochondrial translation inhibition. Nucleic Acids Research, 2010, 38, 3732-3742.	14.5	48
28	PPR (pentatricopeptide repeat) proteins in mammals: important aids to mitochondrial gene expression. Biochemical Journal, 2008, 416, e5-e6.	3.7	46
29	Defective mitochondrial protease LonP1 can cause classical mitochondrial disease. Human Molecular Genetics, 2018, 27, 1743-1753.	2.9	46
30	Development of passive CLARITY and immunofluorescent labelling of multiple proteins in human cerebellum: understanding mechanisms of neurodegeneration in mitochondrial disease. Scientific Reports, 2016, 6, 26013.	3.3	43
31	Termination of Protein Synthesis in Mammalian Mitochondria. Journal of Biological Chemistry, 2011, 286, 34479-34485.	3.4	42
32	Advances in methods for reducing mitochondrial DNA disease by replacing or manipulating the mitochondrial genome. Essays in Biochemistry, 2018, 62, 455-465.	4.7	35
33	The mRNA-binding protein COLBP is glutamate dehydrogenase. FEBS Letters, 1995, 367, 291-296.	2.8	34
34	The human RNA-binding protein RBFA promotes the maturation of the mitochondrial ribosome. Biochemical Journal, 2017, 474, 2145-2158.	3.7	33
35	High-resolution imaging reveals compartmentalization of mitochondrial protein synthesis in cultured human cells. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	33
36	Cl-out is a novel cooperative optogenetic tool for extruding chloride from neurons. Nature Communications, 2016, 7, 13495.	12.8	31

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37	An antigenomic strategy for treating heteroplasmic mtDNA disorders. Advanced Drug Delivery Reviews, 2001, 49, 121-125.	13.7	30
38	Preferential amplification of a human mitochondrial DNA deletion in vitro and in vivo. Scientific Reports, 2018, 8, 1799.	3.3	30
39	The presence of highly disruptive 16S rRNA mutations in clinical samples indicates a wider role for mutations of the mitochondrial ribosome in human disease. Mitochondrion, 2015, 25, 17-27.	3.4	29
40	Pathogenic variants in HTRA2 cause an earlyâ€onset mitochondrial syndrome associated with 3â€methylglutaconic aciduria. Journal of Inherited Metabolic Disease, 2017, 40, 121-130.	3.6	23
41	Adult Onset Leigh Syndrome in the Intensive Care Setting: A Novel Presentation of a C12orf65 Related Mitochondrial Disease. Journal of Neuromuscular Diseases, 2015, 2, 409-419.	2.6	22
42	Human mitochondrial nucleases. FEBS Journal, 2017, 284, 1767-1777.	4.7	20
43	The role of TDP1 and APTX in mitochondrial DNA repair. Biochimie, 2014, 100, 121-124.	2.6	19
44	Assessing the Delivery of Molecules to the Mitochondrial Matrix Using Click Chemistry. ChemBioChem, 2016, 17, 1312-1316.	2.6	17
45	Inhibition of mitochondrial protein synthesis promotes autonomous regulation of mtDNA expression and generation of a new mitochondrial RNA species. FEBS Letters, 2001, 494, 186-191.	2.8	16
46	Overcoming stalled translation in human mitochondria. Frontiers in Microbiology, 2014, 5, 374.	3.5	16
47	An essential guide to mtDNA maintenance. Nature Genetics, 1998, 18, 199-200.	21.4	15
48	Rescuing stalled mammalian mitoribosomes â€“ what can we learn from bacteria?. Journal of Cell Science, 2020, 133, .	2.0	14
49	Messenger RNA delivery to mitoribosomes â€“ hints from a bacterial toxin. FEBS Journal, 2021, 288, 437-451.	4.7	10
50	Visualizing Mitochondrial Ribosomal RNA and Mitochondrial Protein Synthesis in Human Cell Lines. Methods in Molecular Biology, 2021, 2192, 159-181.	0.9	6
51	Fending off decay: A combinatorial approach in intact cells for identifying mRNA stability elements. Rna, 2001, 7, 435-444.	3.5	5
52	Signedâ€For Delivery in the Mitochondrial Matrix: Confirming Uptake into Mitochondria. Small Methods, 2018, 2, 1700297.	8.6	5
53	Mammalian mitochondrial translation â€” revealing consequences of divergent evolution. Biochemical Society Transactions, 2019, 47, 1429-1436.	3.4	5
54	How much does a disrupted mitochondrial network influence neuronal dysfunction?. EMBO Molecular Medicine, 2019, 11, .	6.9	5

#	Article	IF	Citations
55	ClickIn: a flexible protocol for quantifying mitochondrial uptake of nucleobase derivatives. Interface Focus, 2017, 7, 20160117.	3.0	4
56	Mitochondrial Translation Occurs Preferentially in the Peri-Nuclear Mitochondrial Network of Cultured Human Cells. Biology, 2021, 10, 1050.	2.8	1
57	Redecorating the Mitochondrial Inner Membrane: A Treatment for mtDNA Disorders. Molecular Therapy, 2020, 28, 1749-1751.	8.2	0