MichaÅ, MiÅ„czuk

List of Publications by Year
in descending order

94 papers	6,580 citations	41344 49 h-index	71685 76 g-index
108 all docs	108 docs citations	108 times ranked	7413 citing authors

#	Article	IF	Citations
1	In vivo mitochondrial base editing via adeno-associated viral delivery to mouse post-mitotic tissue. Nature Communications, 2022, 13, 750.	12.8	45
2	The potential of mitochondrial genome engineering. Nature Reviews Genetics, 2022, 23, 199-214.	16.3	59
3	A late-stage assembly checkpoint of the human mitochondrial ribosome large subunit. Nature Communications, 2022, 13, 929.	12.8	13
4	DNA polymerase gamma mutations that impair holoenzyme stability cause catalytic subunit depletion. Nucleic Acids Research, 2021, 49, 5230-5248.	14.5	15
5	YbeY is required for ribosome small subunit assembly and tRNA processing in human mitochondria. Nucleic Acids Research, 2021, 49, 5798-5812.	14.5	8
6	Quantitative density gradient analysis by mass spectrometry (qDGMS) and complexome profiling analysis (ComPrAn) R package for the study of macromolecular complexes. Biochimica Et Biophysica Acta - Bioenergetics, 2021, 1862, 148399.	1.0	16
7	Duplexing complexome profiling with SILAC to study human respiratory chain assembly defects. Biochimica Et Biophysica Acta - Bioenergetics, 2021, 1862, 148395.	1.0	15
8	Detection of 5-formylcytosine in Mitochondrial Transcriptome. Methods in Molecular Biology, 2021, 2192, 59-68.	0.9	7
9	The FASTK family proteins fine-tune mitochondrial RNA processing. PLoS Genetics, 2021, 17, e1009873.	3.5	16
10	Balancing of mitochondrial translation through METTL8-mediated m3C modification of mitochondrial tRNAs. Molecular Cell, 2021, 81, 4810-4825.e12.	9.7	44
11	Disruption of the TCA cycle reveals an ATF4-dependent integration of redox and amino acid metabolism. ELife, 2021, 10, .	6.0	44
12	Elongational stalling activates mitoribosome-associated quality control. Science, 2020, 370, 1105-1110.	12.6	74
13	Mitochondrially targeted zinc finger nucleases. , 2020, , 499-514.		0
14	TRMT2B is responsible for both tRNA and rRNA m⁵U-methylation in human mitochondria. RNA Biology, 2020, 17, 451-462.	3.1	46
15	Manipulation of mitochondrial genes and mtDNA heteroplasmy. Methods in Cell Biology, 2020, 155, 441-487.	1.1	15
16	A homozygous MRPL24 mutation causes a complex movement disorder and affects the mitoribosome assembly. Neurobiology of Disease, 2020, 141, 104880.	4.4	29
17	Therapeutic Manipulation of mtDNA Heteroplasmy: A Shifting Perspective. Trends in Molecular Medicine, 2020, 26, 698-709.	6.7	52
18	Metabolic shift underlies recovery in reversible infantile respiratory chain deficiency. EMBO Journal, 2020, 39, e105364.	7.8	26

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19	Cardiac mitochondrial function depends on BUD23 mediated ribosome programming. ELife, 2020, 9, .	6.0	10
20	Mitochondrially-targeted APOBEC1 is a potent mtDNA mutator affecting mitochondrial function and organismal fitness in Drosophila. Nature Communications, 2019, 10, 3280.	12.8	23
21	Energetic costs of cellular and therapeutic control of stochastic mitochondrial DNA populations. PLoS Computational Biology, 2019, 15, e1007023.	3.2	20
22	NSUN2 introduces 5-methylcytosines in mammalian mitochondrial tRNAs. Nucleic Acids Research, 2019, 47, 8720-8733.	14.5	84
23	METTL15 introduces N4-methylcytidine into human mitochondrial 12S rRNA and is required for mitoribosome biogenesis. Nucleic Acids Research, 2019, 47, 10267-10281.	14.5	70
24	Mechanisms of Mitochondrial DNA Deletion Formation. Trends in Genetics, 2019, 35, 235-244.	6.7	62
25	EXD2 Protects Stressed Replication Forks and Is Required for Cell Viability in the Absence of BRCA1/2. Molecular Cell, 2019, 75, 605-619.e6.	9.7	26
26	The structure of human EXD2 reveals a chimeric 3â€² to 5â€² exonuclease domain that discriminates substrates via metal coordination. Nucleic Acids Research, 2019, 47, 7078-7093.	14.5	29
27	Mutations inELAC2associated with hypertrophic cardiomyopathy impair mitochondrial tRNA 3â€²â€end processing. Human Mutation, 2019, 40, 1731-1748.	2.5	31
28	The mammalian mitochondrial epitranscriptome. Biochimica Et Biophysica Acta - Gene Regulatory Mechanisms, 2019, 1862, 429-446.	1.9	40
29	Heterozygous SSBP1 start loss mutation co-segregates with hearing loss and the m.1555A>G mtDNA variant in a large multigenerational family. Brain, 2018, 141, 55-62.	7.6	19
30	NADH Shuttling Couples Cytosolic Reductive Carboxylation of Glutamine with Glycolysis in Cells with Mitochondrial Dysfunction. Molecular Cell, 2018, 69, 581-593.e7.	9.7	171
31	Myosin VI-Dependent Actin Cages Encapsulate Parkin-Positive Damaged Mitochondria. Developmental Cell, 2018, 44, 484-499.e6.	7.0	77
32	Linear mitochondrial DNA is rapidly degraded by components of the replication machinery. Nature Communications, 2018, 9, 1727.	12.8	151
33	Variants in PUS7 Cause Intellectual Disability with Speech Delay, Microcephaly, Short Stature, and Aggressive Behavior. American Journal of Human Genetics, 2018, 103, 1045-1052.	6.2	89
34	Pathogenic variants in glutamyl-tRNAGln amidotransferase subunits cause a lethal mitochondrial cardiomyopathy disorder. Nature Communications, 2018, 9, 4065.	12.8	44
35	Genome editing in mitochondria corrects a pathogenic mtDNA mutation in vivo. Nature Medicine, 2018, 24, 1691-1695.	30.7	215
36	Delivery of mtZFNs into Early Mouse Embryos. Methods in Molecular Biology, 2018, 1867, 215-228.	0.9	6

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37	Enhanced Manipulation of Human Mitochondrial DNA Heteroplasmy In Vitro Using Tunable mtZFN Technology. Methods in Molecular Biology, 2018, 1867, 43-56.	0.9	8
38	Mitochondrial transcription and translation: overview. Essays in Biochemistry, 2018, 62, 309-320.	4.7	192
39	Mitochondrial Genome Engineering: The Revolution May Not Be CRISPR-Ized. Trends in Genetics, 2018, 34, 101-110.	6.7	230
40	The Pseudouridine Synthase RPUSD4 Is an Essential Component of Mitochondrial RNA Granules. Journal of Biological Chemistry, 2017, 292, 4519-4532.	3.4	79
41	Regulation of Mammalian Mitochondrial Gene Expression: Recent Advances. Trends in Biochemical Sciences, 2017, 42, 625-639.	7.5	151
42	Macropinocytic entry of isolated mitochondria in epidermal growth factor-activated human osteosarcoma cells. Scientific Reports, 2017, 7, 12886.	3.3	30
43	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
44	New insights into the phenotype of FARS2 deficiency. Molecular Genetics and Metabolism, 2017, 122, 172-181.	1.1	38
45	Human mitochondrial ribosomes can switch structural tRNAs â€“ but when and why?. RNA Biology, 2017, 14, 1668-1671.	3.1	18
46	Defective mitochondrial rRNA methyltransferase MRM2 causes MELAS-like clinical syndrome. Human Molecular Genetics, 2017, 26, 4257-4266.	2.9	63
47	DealingÂwithÂanÂUnconventionalÂGeneticÂCodeÂinÂ Mitochondria:ÂTheÂBiogenesisÂandÂPathogenicÂ DefectsÂofÂtheÂ5â€FormylcytosineÂModificationÂinÂ MitochondrialÂtRNAMet. Biomolecules, 2017, 7, 24.	4.0	24
48	Maturation of selected human mitochondrial tRNAs requires deadenylation. ELife, 2017, 6, .	6.0	72
49	TRNT1 deficiency: clinical, biochemical and molecular genetic features. Orphanet Journal of Rare Diseases, 2016, 11, 90.	2.7	64
50	Human Cytomegalovirus Infection Upregulates the Mitochondrial Transcription and Translation Machineries. MBio, 2016, 7, e00029.	4.1	55
51	Near-complete elimination of mutant mtDNA by iterative or dynamic dose-controlled treatment with mtZFNs. Nucleic Acids Research, 2016, 44, 7804-7816.	14.5	97
52	Deficient methylation and formylation of mt-tRNAMet wobble cytosine in a patient carrying mutations in NSUN3. Nature Communications, 2016, 7, 12039.	12.8	178
53	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
54	Engineered mtZFNs for Manipulation of Human Mitochondrial DNA Heteroplasmy. Methods in Molecular Biology, 2016, 1351, 145-162.	0.9	33

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55	Mitochondrial transcript maturation and its disorders. Journal of Inherited Metabolic Disease, 2015, 38, 655-680.	3.6	69
56	Two Siblings with Homozygous Pathogenic Splice-Site Variant in Mitochondrial Asparaginyl-tRNA Synthetase (NARS2). Human Mutation, 2015, 36, 222-231.	2.5	51
57	TRMT5 Mutations Cause a Defect in Post-transcriptional Modification of Mitochondrial tRNA Associated with Multiple Respiratory-Chain Deficiencies. American Journal of Human Genetics, 2015, 97, 319-328.	6.2	83
58	Nuclear-encoded factors involved in post-transcriptional processing and modification of mitochondrial tRNAs in human disease. Frontiers in Genetics, 2015, 6, 79.	2.3	69
59	Mutations in the mitochondrial cysteinyl-tRNA synthase gene,CARS2,lead to a severe epileptic encephalopathy and complex movement disorder. Journal of Medical Genetics, 2015, 52, 532-540.	3.2	62
60	Amino Acid Starvation Has Opposite Effects on Mitochondrial and Cytosolic Protein Synthesis. PLoS ONE, 2014, 9, e93597.	2.5	48
61	Mutations in GTPBP3 Cause a Mitochondrial Translation Defect Associated with Hypertrophic Cardiomyopathy, Lactic Acidosis, and Encephalopathy. American Journal of Human Genetics, 2014, 95, 708-720.	6.2	123
62	MPV17L2 is required for ribosome assembly in mitochondria. Nucleic Acids Research, 2014, 42, 8500-8515.	14.5	56
63	MRM2 and MRM3 are involved in biogenesis of the large subunit of the mitochondrial ribosome. Molecular Biology of the Cell, 2014, 25, 2542-2555.	2.1	99
64	Linear mtDNA fragments and unusual mtDNA rearrangements associated with pathological deficiency of MGME1 exonuclease. Human Molecular Genetics, 2014, 23, 6147-6162.	2.9	64
65	In D-loop: 40years of mitochondrial 7S DNA. Experimental Gerontology, 2014, 56, 175-181.	2.8	207
66	Polyadenylation in Bacteria and Organelles. Methods in Molecular Biology, 2014, 1125, 211-227.	0.9	23
67	VARS2andTARS2Mutations in Patients with Mitochondrial Encephalomyopathies. Human Mutation, 2014, 35, 983-989.	2.5	86
68	Mitochondrially targeted <scp>ZFN</scp>s for selective degradation of pathogenic mitochondrial genomes bearing largeâ€scale deletions or point mutations. EMBO Molecular Medicine, 2014, 6, 458-466.	6.9	237
69	ELAC2 Mutations Cause a Mitochondrial RNA Processing Defect Associated with Hypertrophic Cardiomyopathy. American Journal of Human Genetics, 2013, 93, 211-223.	6.2	127
70	Mitochondria: Mitochondrial RNA metabolism and human disease. International Journal of Biochemistry and Cell Biology, 2013, 45, 845-849.	2.8	34
71	Loss-of-function mutations in MGME1 impair mtDNA replication and cause multisystemic mitochondrial disease. Nature Genetics, 2013, 45, 214-219.	21.4	198
72	Alternative translation initiation augments the human mitochondrial proteome. Nucleic Acids Research, 2013, 41, 2354-2369.	14.5	56

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73	C7orf30 is necessary for biogenesis of the large subunit of the mitochondrial ribosome. Nucleic Acids Research, 2012, 40, 4097-4109.	14.5	64
74	The post-transcriptional life of mammalian mitochondrial RNA. Biochemical Journal, 2012, 444, 357-373.	3.7	114
75	TEFM (c17orf42) is necessary for transcription of human mtDNA. Nucleic Acids Research, 2011, 39, 4284-4299.	14.5	142
76	PDE12 removes mitochondrial RNA poly(A) tails and controls translation in human mitochondria. Nucleic Acids Research, 2011, 39, 7750-7763.	14.5	91
77	Polyadenylation of mt mRNA: Identification of novel deadenylase of human mitochondria. Biochimica Et Biophysica Acta - Bioenergetics, 2010, 1797, 105.	1.0	0
78	An Upstream Open Reading Frame and the Context of the Two AUG Codons Affect the Abundance of Mitochondrial and Nuclear RNase H1. Molecular and Cellular Biology, 2010, 30, 5123-5134.	2.3	83
79	Construction and testing of engineered zinc-finger proteins for sequence-specific modification of mtDNA. Nature Protocols, 2010, 5, 342-356.	12.0	50
80	Engineered Zinc Finger Proteins for Manipulation of the Human Mitochondrial Genome. Methods in Molecular Biology, 2010, 649, 257-270.	0.9	10
81	Development of a single-chain, quasi-dimeric zinc-finger nuclease for the selective degradation of mutated human mitochondrial DNA. Nucleic Acids Research, 2008, 36, 3926-3938.	14.5	195
82	Chimeric DNA methyltransferases target DNA methylation to specific DNA sequences and repress expression of target genes. Nucleic Acids Research, 2007, 35, 100-112.	14.5	126
83	Designer zinc-finger proteins and their applications. Gene, 2006, 366, 27-38.	2.2	131
84	Sequence-specific modification of mitochondrial DNA using a chimeric zinc finger methylase. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 19689-19694.	7.1	147
85	Human ATP-dependent RNA/DNA helicase hSuv3p interacts with the cofactor of survivin HBXIP. FEBS Journal, 2005, 272, 5008-5019.	4.7	37
86	The 5â€² region of the human hSUV3 gene encoding mitochondrial DNA and RNA helicase: Promoter characterization and alternative pre-mRNA splicing. Biochimica Et Biophysica Acta Gene Regulatory Mechanisms, 2005, 1729, 81-87.	2.4	11
87	RNA Degradation in Yeast and Human Mitochondria. Toxicology Mechanisms and Methods, 2004, 14, 53-57.	2.7	1
88	Human Polynucleotide Phosphorylase, hPNPase, is Localized in Mitochondria. Journal of Molecular Biology, 2003, 329, 853-857.	4.2	78
89	Potent Inhibition of NTPase/Helicase of the West Nile Virus by Ring-Expanded (â€œFatâ€) Nucleoside Analogues. Journal of Medicinal Chemistry, 2003, 46, 4776-4789.	6.4	68
90	The Yeast Mitochondrial Degradosome. Journal of Biological Chemistry, 2003, 278, 1603-1611.	3.4	135

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91	Inhibition of herpes simplex virus 1 gene expression by designer zinc-finger transcription factors. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 1621-1626.	7.1	76
92	Localisation of the human hSuv3p helicase in the mitochondrial matrix and its preferential unwinding of dsDNA. Nucleic Acids Research, 2002, 30, 5074-5086.	14.5	81
93	Overexpressed yeast mitochondrial putative RNA helicase Mss116 partially restores proper mtRNA metabolism in strains lacking the Suv3 mtRNA helicase. Yeast, 2002, 19, 1285-1293.	1.7	18
94	The yeast nuclear gene DSS1, which codes for a putative RNase II, is necessary for the function of the mitochondrial degradosome in processing and turnover of RNA. Molecular Genetics and Genomics, 1998, 260, 108-114.	2.4	63