

David C Chan

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

87
papers

23,241
citations

52
h-index

91
g-index

91
ext. papers

26,577
ext. citations

13.3
avg, IF

7.63
L-index

#	Paper	IF	Citations
87	Guidelines for the use and interpretation of assays for monitoring autophagy. <i>Autophagy</i> , 2012 , 8, 445-544.	14.2	2783
86	Mitofusins Mfn1 and Mfn2 coordinately regulate mitochondrial fusion and are essential for embryonic development. <i>Journal of Cell Biology</i> , 2003 , 160, 189-200	7.3	1735
85	Mitochondria: dynamic organelles in disease, aging, and development. <i>Cell</i> , 2006 , 125, 1241-52	56.2	1463
84	Mitochondrial dynamics--fusion, fission, movement, and mitophagy--in neurodegenerative diseases. <i>Human Molecular Genetics</i> , 2009 , 18, R169-76	5.6	1032
83	Functions and dysfunctions of mitochondrial dynamics. <i>Nature Reviews Molecular Cell Biology</i> , 2007 , 8, 870-9	48.7	990
82	Disruption of fusion results in mitochondrial heterogeneity and dysfunction. <i>Journal of Biological Chemistry</i> , 2005 , 280, 26185-92	5.4	962
81	Mitochondrial fusion is required for mtDNA stability in skeletal muscle and tolerance of mtDNA mutations. <i>Cell</i> , 2010 , 141, 280-9	56.2	806
80	Fusion and fission: interlinked processes critical for mitochondrial health. <i>Annual Review of Genetics</i> , 2012 , 46, 265-87	14.5	783
79	Broad activation of the ubiquitin-proteasome system by Parkin is critical for mitophagy. <i>Human Molecular Genetics</i> , 2011 , 20, 1726-37	5.6	737
78	Mitochondrial fusion and fission in mammals. <i>Annual Review of Cell and Developmental Biology</i> , 2006 , 22, 79-99	12.6	710
77	Mitochondrial fusion protects against neurodegeneration in the cerebellum. <i>Cell</i> , 2007 , 130, 548-62	56.2	681
76	Fis1, Mff, MiD49, and MiD51 mediate Drp1 recruitment in mitochondrial fission. <i>Molecular Biology of the Cell</i> , 2013 , 24, 659-67	3.5	675
75	Structural basis of mitochondrial tethering by mitofusin complexes. <i>Science</i> , 2004 , 305, 858-62	33.3	654
74	Mitochondrial dynamics and inheritance during cell division, development and disease. <i>Nature Reviews Molecular Cell Biology</i> , 2014 , 15, 634-46	48.7	600
73	Metabolism. AMP-activated protein kinase mediates mitochondrial fission in response to energy stress. <i>Science</i> , 2016 , 351, 275-281	33.3	583
72	OPA1 processing controls mitochondrial fusion and is regulated by mRNA splicing, membrane potential, and Yme1L. <i>Journal of Cell Biology</i> , 2007 , 178, 749-55	7.3	583
71	Metabolic regulation of mitochondrial dynamics. <i>Journal of Cell Biology</i> , 2016 , 212, 379-87	7.3	582

70	SLP-2 is required for stress-induced mitochondrial hyperfusion. <i>EMBO Journal</i> , 2009 , 28, 1589-600	13	495
69	Emerging functions of mammalian mitochondrial fusion and fission. <i>Human Molecular Genetics</i> , 2005 , 14 Spec No. 2, R283-9	5.6	405
68	Mitofusins and OPA1 mediate sequential steps in mitochondrial membrane fusion. <i>Molecular Biology of the Cell</i> , 2009 , 20, 3525-32	3.5	377
67	Quantitation of mitochondrial dynamics by photolabeling of individual organelles shows that mitochondrial fusion is blocked during the Bax activation phase of apoptosis. <i>Journal of Cell Biology</i> , 2004 , 164, 493-9	7.3	343
66	A common lipid links Mfn-mediated mitochondrial fusion and SNARE-regulated exocytosis. <i>Nature Cell Biology</i> , 2006 , 8, 1255-62	23.4	339
65	Proteolytic cleavage of Opa1 stimulates mitochondrial inner membrane fusion and couples fusion to oxidative phosphorylation. <i>Cell Metabolism</i> , 2014 , 19, 630-41	24.6	257
64	SIRT3 deacetylates and activates OPA1 to regulate mitochondrial dynamics during stress. <i>Molecular and Cellular Biology</i> , 2014 , 34, 807-19	4.8	250
63	Mitochondrial Dynamics and Its Involvement in Disease. <i>Annual Review of Pathology: Mechanisms of Disease</i> , 2020 , 15, 235-259	34	232
62	Complementation between mouse Mfn1 and Mfn2 protects mitochondrial fusion defects caused by CMT2A disease mutations. <i>Journal of Cell Biology</i> , 2007 , 176, 405-14	7.3	230
61	Mitochondrial Dynamics in Regulating the Unique Phenotypes of Cancer and Stem Cells. <i>Cell Metabolism</i> , 2017 , 26, 39-48	24.6	219
60	The WD40 protein Caf4p is a component of the mitochondrial fission machinery and recruits Dnm1p to mitochondria. <i>Journal of Cell Biology</i> , 2005 , 170, 237-48	7.3	202
59	Crystal structure of the simian immunodeficiency virus (SIV) gp41 core: conserved helical interactions underlie the broad inhibitory activity of gp41 peptides. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1998 , 95, 9134-9	11.5	192
58	Elimination of paternal mitochondria in mouse embryos occurs through autophagic degradation dependent on PARKIN and MUL1. <i>ELife</i> , 2016 , 5,	8.9	180
57	Critical dependence of neurons on mitochondrial dynamics. <i>Current Opinion in Cell Biology</i> , 2006 , 18, 453-9	9	176
56	OPA1 disease alleles causing dominant optic atrophy have defects in cardiolipin-stimulated GTP hydrolysis and membrane tubulation. <i>Human Molecular Genetics</i> , 2010 , 19, 2113-22	5.6	166
55	MFN1 structures reveal nucleotide-triggered dimerization critical for mitochondrial fusion. <i>Nature</i> , 2017 , 542, 372-376	50.4	149
54	Mitochondrial dynamics in mammals. <i>Current Topics in Developmental Biology</i> , 2004 , 59, 119-44	5.3	135
53	Distinct structural features of TFAM drive mitochondrial DNA packaging versus transcriptional activation. <i>Nature Communications</i> , 2014 , 5, 3077	17.4	132

52	The glutamate/cystine xCT antiporter antagonizes glutamine metabolism and reduces nutrient flexibility. <i>Nature Communications</i> , 2017 , 8, 15074	17.4	126
51	Loss of Mfn2 results in progressive, retrograde degeneration of dopaminergic neurons in the nigrostriatal circuit. <i>Human Molecular Genetics</i> , 2012 , 21, 4817-26	5.6	126
50	Mitochondrial Dynamics is a Distinguishing Feature of Skeletal Muscle Fiber Types and Regulates Organellar Compartmentalization. <i>Cell Metabolism</i> , 2015 , 22, 1033-44	24.6	122
49	Mouse lines with photo-activatable mitochondria to study mitochondrial dynamics. <i>Genesis</i> , 2012 , 50, 833-43	1.9	118
48	Reconstructing hominid Y evolution: X-homologous block, created by X-Y transposition, was disrupted by Yp inversion through LINE-LINE recombination. <i>Human Molecular Genetics</i> , 1998 , 7, 1-11	5.6	113
47	Hindlimb gait defects due to motor axon loss and reduced distal muscles in a transgenic mouse model of Charcot-Marie-Tooth type 2A. <i>Human Molecular Genetics</i> , 2008 , 17, 367-75	5.6	106
46	MitoTALEN: A General Approach to Reduce Mutant mtDNA Loads and Restore Oxidative Phosphorylation Function in Mitochondrial Diseases. <i>Molecular Therapy</i> , 2015 , 23, 1592-9	11.7	105
45	Structural basis for recruitment of mitochondrial fission complexes by Fis1. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007 , 104, 18526-30	11.5	105
44	OPA1 Isoforms in the Hierarchical Organization of Mitochondrial Functions. <i>Cell Reports</i> , 2017 , 19, 2557-2571	25.7	103
43	The mitochondrial fission receptor Mff selectively recruits oligomerized Drp1. <i>Molecular Biology of the Cell</i> , 2015 , 26, 4466-77	3.5	100
42	Titration of mitochondrial fusion rescues Mff-deficient cardiomyopathy. <i>Journal of Cell Biology</i> , 2015 , 211, 795-805	7.3	96
41	A novel de novo dominant negative mutation in DNM1L impairs mitochondrial fission and presents as childhood epileptic encephalopathy. <i>American Journal of Medical Genetics, Part A</i> , 2016 , 170, 2002-11	2.5	86
40	Mitochondrial dynamics in disease. <i>New England Journal of Medicine</i> , 2007 , 356, 1707-9	59.2	78
39	Mitochondrial DNA: impacting central and peripheral nervous systems. <i>Neuron</i> , 2014 , 84, 1126-42	13.9	77
38	The mitochondrial fission receptor MiD51 requires ADP as a cofactor. <i>Structure</i> , 2014 , 22, 367-77	5.2	63
37	Dissecting mitochondrial fusion. <i>Developmental Cell</i> , 2006 , 11, 592-4	10.2	61
36	Lysocardiolipin acyltransferase 1 (ALCAT1) controls mitochondrial DNA fidelity and biogenesis through modulation of MFN2 expression. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 6975-80	11.5	57
35	MIRO-1 Determines Mitochondrial Shape Transition upon GPCR Activation and Ca Stress. <i>Cell Reports</i> , 2018 , 23, 1005-1019	10.6	51

34	Sam50 Regulates PINK1-Parkin-Mediated Mitophagy by Controlling PINK1 Stability and Mitochondrial Morphology. <i>Cell Reports</i> , 2018 , 23, 2989-3005	10.6	49
33	Molecular mechanism of mitochondrial membrane fusion. <i>Biochimica Et Biophysica Acta - Molecular Cell Research</i> , 2006 , 1763, 482-9	4.9	47
32	Domain interactions within Fzo1 oligomers are essential for mitochondrial fusion. <i>Journal of Biological Chemistry</i> , 2006 , 281, 16599-606	5.4	47
31	New insights into mitochondrial fusion. <i>FEBS Letters</i> , 2007 , 581, 2168-73	3.8	45
30	Valosin-containing protein (VCP/p97) inhibitors relieve Mitofusin-dependent mitochondrial defects due to VCP disease mutants. <i>ELife</i> , 2017 , 6,	8.9	44
29	Structural insights of human mitofusin-2 into mitochondrial fusion and CMT2A onset. <i>Nature Communications</i> , 2019 , 10, 4914	17.4	41
28	Genome-wide analysis reveals coating of the mitochondrial genome by TFAM. <i>PLoS ONE</i> , 2013 , 8, e74513	3.7	39
27	Metabolic Stress-Induced Phosphorylation of KAP1 Ser473 Blocks Mitochondrial Fusion in Breast Cancer Cells. <i>Cancer Research</i> , 2016 , 76, 5006-18	10.1	37
26	Hierarchical and stage-specific regulation of murine cardiomyocyte maturation by serum response factor. <i>Nature Communications</i> , 2018 , 9, 3837	17.4	36
25	Parkin uses the UPS to ship off dysfunctional mitochondria. <i>Autophagy</i> , 2011 , 7, 771-2	10.2	34
24	Crystal structure and functional analysis of MiD49, a receptor for the mitochondrial fission protein Drp1. <i>Protein Science</i> , 2015 , 24, 386-94	6.3	31
23	Mitochondrial fusion is required for spermatogonial differentiation and meiosis. <i>ELife</i> , 2019 , 8,	8.9	26
22	Evidence for site-specific occupancy of the mitochondrial genome by nuclear transcription factors. <i>PLoS ONE</i> , 2014 , 9, e84713	3.7	25
21	Deciphering OPA1 mutations pathogenicity by combined analysis of human, mouse and yeast cell models. <i>Biochimica Et Biophysica Acta - Molecular Basis of Disease</i> , 2018 , 1864, 3496-3514	6.9	23
20	OPA1 and cardiolipin team up for mitochondrial fusion. <i>Nature Cell Biology</i> , 2017 , 19, 760-762	23.4	22
19	Crystal structure of mitochondrial fission complex reveals scaffolding function for mitochondrial division 1 (Mdv1) coiled coil. <i>Journal of Biological Chemistry</i> , 2012 , 287, 9855-9861	5.4	21
18	Degradation of the deubiquitinating enzyme USP33 is mediated by p97 and the ubiquitin ligase HERC2. <i>Journal of Biological Chemistry</i> , 2014 , 289, 19789-98	5.4	18
17	Mitochondrial dynamics during spermatogenesis. <i>Journal of Cell Science</i> , 2020 , 133,	5.3	16

16	LONP1 and mtHSP70 cooperate to promote mitochondrial protein folding. <i>Nature Communications</i> , 2021 , 12, 265	17.4	16
15	Eliminating mitochondrial DNA from sperm. <i>Developmental Cell</i> , 2012 , 22, 469-70	10.2	15
14	De Novo DNM1L Variant in a Teenager With Progressive Paroxysmal Dystonia and Lethal Super-refractory Myoclonic Status Epilepticus. <i>Journal of Child Neurology</i> , 2018 , 33, 651-658	2.5	13
13	Identification of new OPA1 cleavage site reveals that short isoforms regulate mitochondrial fusion. <i>Molecular Biology of the Cell</i> , 2021 , 32, 157-168	3.5	13
12	Drp1 Tubulates the ER in a GTPase-Independent Manner. <i>Molecular Cell</i> , 2020 , 80, 621-632.e6	17.6	10
11	Mitochondrial fission factor (Mff) is required for organization of the mitochondrial sheath in spermatids. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2021 , 1865, 129845	4	8
10	miR-379 deletion ameliorates features of diabetic kidney disease by enhancing adaptive mitophagy via FIS1. <i>Communications Biology</i> , 2021 , 4, 30	6.7	7
9	Analyzing mitochondrial dynamics in mouse organotypic slice cultures. <i>Methods in Enzymology</i> , 2014 , 547, 111-29	1.7	6
8	Fis1 ablation in the male germline disrupts mitochondrial morphology and mitophagy, and arrests spermatid maturation. <i>Development (Cambridge)</i> , 2021 , 148,	6.6	5
7	Solving neurodegeneration: common mechanisms and strategies for new treatments.. <i>Molecular Neurodegeneration</i> , 2022 , 17, 23	19	5
6	Removal of the Mitochondrial Fission Factor Mff Exacerbates Neuronal Loss and Neurological Phenotypes in a Huntington's Disease Mouse Model. <i>PLOS Currents</i> , 2018 , 10,		4
5	Author response: Elimination of paternal mitochondria in mouse embryos occurs through autophagic degradation dependent on PARKIN and MUL1 2016 ,		3
4	Clueless/CLUH regulates mitochondrial fission by promoting recruitment of Drp1 to mitochondria.. <i>Nature Communications</i> , 2022 , 13, 1582	17.4	3
3	ER-associated CTRP1 regulates mitochondrial fission via interaction with DRP1. <i>Experimental and Molecular Medicine</i> , 2021 , 53, 1769-1780	12.8	1
2	Mitochondrial Respiratory Measurements in Patient-derived Fibroblasts. <i>Bio-protocol</i> , 2019 , 9, e3446	0.9	
1	Fis1, Mff, MiD49 and MiD51 facilitate Drp1 recruitment for mitochondrial fission. <i>FASEB Journal</i> , 2013 , 27, 582.2	0.9	