

Thomas Langer

List of Publications by Year in descending order

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123
papers

16,604
citations

13827

67
h-index

18606

119
g-index

132
all docs

132
docs citations

132
times ranked

15271
citing authors

#	ARTICLE	IF	CITATIONS
1	Mitochondrial Dynamics and Metabolic Regulation. Trends in Endocrinology and Metabolism, 2016, 27, 105-117.	3.1	922
2	SLP-2 is required for stress-induced mitochondrial hyperfusion. EMBO Journal, 2009, 28, 1589-1600.	3.5	639
3	The <i>m</i> -AAA protease YME1L and OMA1 cleave OPA1 to balance mitochondrial fusion and fission. Journal of Cell Biology, 2014, 204, 919-929.	2.3	603
4	Regulation of OPA1 processing and mitochondrial fusion by <i>m</i> -AAA protease isoenzymes and OMA1. Journal of Cell Biology, 2009, 187, 1023-1036.	2.3	500
5	Making heads or tails of phospholipids in mitochondria. Journal of Cell Biology, 2011, 192, 7-16.	2.3	497
6	Quality control of mitochondria: protection against neurodegeneration and ageing. EMBO Journal, 2008, 27, 306-314.	3.5	475
7	Prohibitins control cell proliferation and apoptosis by regulating OPA1-dependent cristae morphogenesis in mitochondria. Genes and Development, 2008, 22, 476-488.	2.7	454
8	New roles for mitochondrial proteases in health, ageing and disease. Nature Reviews Molecular Cell Biology, 2015, 16, 345-359.	16.1	453
9	Imbalanced OPA1 processing and mitochondrial fragmentation cause heart failure in mice. Science, 2015, 350, aad0116.	6.0	403
10	The <i>m</i> -AAA Protease Defective in Hereditary Spastic Paraplegia Controls Ribosome Assembly in Mitochondria. Cell, 2005, 123, 277-289.	13.5	344
11	Mitochondrial quality control: a matter of life and death for neurons. EMBO Journal, 2012, 31, 1336-1349.	3.5	335
12	Prohibitin function within mitochondria: Essential roles for cell proliferation and cristae morphogenesis. Biochimica Et Biophysica Acta - Molecular Cell Research, 2009, 1793, 27-32.	1.9	332
13	OPA1 processing in cell death and disease – the long and short of it. Journal of Cell Science, 2016, 129, 2297-306.	1.2	306
14	The YTA10 ¹² Complex, an AAA Protease with Chaperone-like Activity in the Inner Membrane of Mitochondria. Cell, 1996, 85, 875-885.	13.5	301
15	Prohibitins Regulate Membrane Protein Degradation by the <i>m</i> -AAA Protease in Mitochondria. Molecular and Cellular Biology, 1999, 19, 3435-3442.	1.1	300
16	Mutations in the mitochondrial protease gene AFG3L2 cause dominant hereditary ataxia SCA28. Nature Genetics, 2010, 42, 313-321.	9.4	291
17	Formation of Membrane-bound Ring Complexes by Prohibitins in Mitochondria. Molecular Biology of the Cell, 2005, 16, 248-259.	0.9	284
18	Prohibitins and the functional compartmentalization of mitochondrial membranes. Journal of Cell Science, 2009, 122, 3823-3830.	1.2	267

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19	The genetic interactome of prohibitins: coordinated control of cardiolipin and phosphatidylethanolamine by conserved regulators in mitochondria. <i>Journal of Cell Biology</i> , 2009, 184, 583-596.	2.3	265
20	Stress-induced OMA1 activation and autocatalytic turnover regulate OPA1-dependent mitochondrial dynamics. <i>EMBO Journal</i> , 2014, 33, 578-593.	3.5	246
21	Loss of m-AAA protease in mitochondria causes complex I deficiency and increased sensitivity to oxidative stress in hereditary spastic paraplegia. <i>Journal of Cell Biology</i> , 2003, 163, 777-787.	2.3	241
22	Protein Degradation within Mitochondria: Versatile Activities of AAA Proteases and Other Peptidases. <i>Critical Reviews in Biochemistry and Molecular Biology</i> , 2007, 42, 221-242.	2.3	228
23	Quality Control of Mitochondrial Proteostasis. <i>Cold Spring Harbor Perspectives in Biology</i> , 2011, 3, a007559-a007559.	2.3	220
24	Mitochondrial lipid trafficking. <i>Trends in Cell Biology</i> , 2014, 24, 44-52.	3.6	212
25	Chaperone-like activity of the AAA domain of the yeast Yme1 AAA protease. <i>Nature</i> , 1999, 398, 348-351.	13.7	210
26	AAA proteases: cellular machines for degrading membrane proteins. <i>Trends in Biochemical Sciences</i> , 2000, 25, 247-251.	3.7	206
27	Intramitochondrial Transport of Phosphatidic Acid in Yeast by a Lipid Transfer Protein. <i>Science</i> , 2012, 338, 815-818.	6.0	206
28	Role of the ABC Transporter Mdl1 in Peptide Export from Mitochondria. <i>Science</i> , 2001, 291, 2135-2138.	6.0	200
29	Whole-Exome Sequencing Identifies Homozygous AFG3L2 Mutations in a Spastic Ataxia-Neuropathy Syndrome Linked to Mitochondrial m-AAA Proteases. <i>PLoS Genetics</i> , 2011, 7, e1002325.	1.5	200
30	Membrane Protein Degradation by AAA Proteases in Mitochondria. <i>Molecular Cell</i> , 2000, 5, 629-638.	4.5	190
31	The E3 Ligase Parkin Maintains Mitochondrial Integrity by Increasing Linear Ubiquitination of NEMO. <i>Molecular Cell</i> , 2013, 49, 908-921.	4.5	183
32	CerS6-Derived Sphingolipids Interact with Mff and Promote Mitochondrial Fragmentation in Obesity. <i>Cell</i> , 2019, 177, 1536-1552.e23.	13.5	183
33	Variable and Tissue-Specific Subunit Composition of Mitochondrial m-AAA Protease Complexes Linked to Hereditary Spastic Paraplegia. <i>Molecular and Cellular Biology</i> , 2007, 27, 758-767.	1.1	172
34	TRIAP1/PRELI Complexes Prevent Apoptosis by Mediating Intramitochondrial Transport of Phosphatidic Acid. <i>Cell Metabolism</i> , 2013, 18, 287-295.	7.2	167
35	OPA1 Processing Reconstituted in Yeast Depends on the Subunit Composition of the m-AAA Protease in Mitochondria. <i>Molecular Biology of the Cell</i> , 2007, 18, 3582-3590.	0.9	162
36	DNAJC19, a Mitochondrial Cochaperone Associated with Cardiomyopathy, Forms a Complex with Prohibitins to Regulate Cardiolipin Remodeling. <i>Cell Metabolism</i> , 2014, 20, 158-171.	7.2	157

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37	Loss of Prohibitin Membrane Scaffolds Impairs Mitochondrial Architecture and Leads to Tau Hyperphosphorylation and Neurodegeneration. <i>PLoS Genetics</i> , 2012, 8, e1003021.	1.5	154
38	The m-AAA Protease Associated with Neurodegeneration Limits MCU Activity in Mitochondria. <i>Molecular Cell</i> , 2016, 64, 148-162.	4.5	153
39	Regulation of mitochondrial phospholipids by Ups1/PRELI-like proteins depends on proteolysis and Mdm35. <i>EMBO Journal</i> , 2010, 29, 2888-2898.	3.5	150
40	The membrane scaffold SLP2 anchors a proteolytic hub in mitochondria containing PARL and the AAA protease YME1L. <i>EMBO Reports</i> , 2016, 17, 1844-1856.	2.0	142
41	MICOS and phospholipid transfer by Ups2/Mdm35 organize membrane lipid synthesis in mitochondria. <i>Journal of Cell Biology</i> , 2016, 213, 525-534.	2.3	136
42	Oma1, a Novel Membrane-bound Metallopeptidase in Mitochondria with Activities Overlapping with the m-AAA Protease. <i>Journal of Biological Chemistry</i> , 2003, 278, 46414-46423.	1.6	135
43	Membrane protein degradation by AAA proteases in mitochondria. <i>Biochimica Et Biophysica Acta - Molecular Cell Research</i> , 2002, 1592, 89-96.	1.9	131
44	Prohibitins Interact Genetically with Atp23, a Novel Processing Peptidase and Chaperone for the F1FO-ATP Synthase. <i>Molecular Biology of the Cell</i> , 2007, 18, 627-635.	0.9	124
45	Mitochondrial Proteases: Multifaceted Regulators of Mitochondrial Plasticity. <i>Annual Review of Biochemistry</i> , 2020, 89, 501-528.	5.0	124
46	The Good and the Bad of Mitochondrial Breakups. <i>Trends in Cell Biology</i> , 2019, 29, 888-900.	3.6	122
47	A mitochondrial phosphatase required for cardiolipin biosynthesis: the PGP phosphatase Gep4. <i>EMBO Journal</i> , 2010, 29, 1976-1987.	3.5	121
48	Lipid signalling drives proteolytic rewiring of mitochondria by YME1L. <i>Nature</i> , 2019, 575, 361-365.	13.7	116
49	Loss of OMA1 delays neurodegeneration by preventing stress-induced OPA1 processing in mitochondria. <i>Journal of Cell Biology</i> , 2016, 212, 157-166.	2.3	115
50	PARL mediates Smac proteolytic maturation in mitochondria to promote apoptosis. <i>Nature Cell Biology</i> , 2017, 19, 318-328.	4.6	111
51	Mitochondrial AAA proteases – Towards a molecular understanding of membrane-bound proteolytic machines. <i>Biochimica Et Biophysica Acta - Molecular Cell Research</i> , 2012, 1823, 49-55.	1.9	107
52	MIROs and DRP1 drive mitochondrial-derived vesicle biogenesis and promote quality control. <i>Nature Cell Biology</i> , 2021, 23, 1271-1286.	4.6	105
53	Acylglycerol Kinase Mutated in Sengers Syndrome Is a Subunit of the TIM22 Protein Translocase in Mitochondria. <i>Molecular Cell</i> , 2017, 67, 471-483.e7.	4.5	104
54	m-AAA protease-driven membrane dislocation allows intramembrane cleavage by rhomboid in mitochondria. <i>EMBO Journal</i> , 2007, 26, 325-335.	3.5	100

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55	An Intersubunit Signaling Network Coordinates ATP Hydrolysis by m-AAA Proteases. <i>Molecular Cell</i> , 2009, 35, 574-585.	4.5	96
56	AAA proteases of mitochondria: quality control of membrane proteins and regulatory functions during mitochondrial biogenesis. <i>Biochemical Society Transactions</i> , 2001, 29, 431-436.	1.6	91
57	Intramitochondrial phospholipid trafficking. <i>Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids</i> , 2017, 1862, 81-89.	1.2	90
58	AFG3L2 supports mitochondrial protein synthesis and Purkinje cell survival. <i>Journal of Clinical Investigation</i> , 2012, 122, 4048-4058.	3.9	90
59	Mitochondrial metabolism coordinates stage-specific repair processes in macrophages during wound healing. <i>Cell Metabolism</i> , 2021, 33, 2398-2414.e9.	7.2	89
60	Homozygous YME1L1 mutation causes mitochondriopathy with optic atrophy and mitochondrial network fragmentation. <i>ELife</i> , 2016, 5, .	2.8	88
61	Characterization of Peptides Released from Mitochondria. <i>Journal of Biological Chemistry</i> , 2005, 280, 2691-2699.	1.6	87
62	Proteolytic control of mitochondrial function and morphogenesis. <i>Biochimica Et Biophysica Acta - Molecular Cell Research</i> , 2013, 1833, 195-204.	1.9	86
63	Organization of Mitochondrial Gene Expression in Two Distinct Ribosome-Containing Assemblies. <i>Cell Reports</i> , 2015, 10, 843-853.	2.9	86
64	m-AAA proteases, mitochondrial calcium homeostasis and neurodegeneration. <i>Cell Research</i> , 2018, 28, 296-306.	5.7	86
65	Food Perception Primes Hepatic ER Homeostasis via Melanocortin-Dependent Control of mTOR Activation. <i>Cell</i> , 2018, 175, 1321-1335.e20.	13.5	86
66	A nutritional memory effect counteracts the benefits of dietary restriction in old mice. <i>Nature Metabolism</i> , 2019, 1, 1059-1073.	5.1	80
67	AAA proteases in mitochondria: diverse functions of membrane-bound proteolytic machines. <i>Research in Microbiology</i> , 2009, 160, 711-717.	1.0	79
68	Role of the Novel Metallopeptidase MoP112 and Saccharolysin for the Complete Degradation of Proteins Residing in Different Subcompartments of Mitochondria. <i>Journal of Biological Chemistry</i> , 2005, 280, 20132-20139.	1.6	77
69	Loss of Prohibitin Induces Mitochondrial Damages Altering β -Cell Function and Survival and Is Responsible for Gradual Diabetes Development. <i>Diabetes</i> , 2013, 62, 3488-3499.	0.3	76
70	PARL partitions the lipid transfer protein STARD7 between the cytosol and mitochondria. <i>EMBO Journal</i> , 2018, 37, .	3.5	75
71	Presequence-dependent folding ensures MrpL32 processing by the m-AAA protease in mitochondria. <i>EMBO Journal</i> , 2011, 30, 2545-2556.	3.5	68
72	Structural insight into the TRIAP-1/PRELI-like domain family of mitochondrial phospholipid transfer complexes. <i>EMBO Reports</i> , 2015, 16, 824-835.	2.0	68

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73	Stomatin-Like Protein 2 Is Required for <i>In Vivo</i> Mitochondrial Respiratory Chain Supercomplex Formation and Optimal Cell Function. <i>Molecular and Cellular Biology</i> , 2015, 35, 1838-1847.	1.1	67
74	Cellular pyrimidine imbalance triggers mitochondrial DNA-dependent innate immunity. <i>Nature Metabolism</i> , 2021, 3, 636-650.	5.1	64
75	Loss of the m-AAA protease subunit AFG3L2 causes mitochondrial transport defects and tau hyperphosphorylation. <i>EMBO Journal</i> , 2014, 33, 1011-1026.	3.5	62
76	Inhibition of insulin/IGF1 receptor signaling protects from mitochondria-mediated kidney failure. <i>EMBO Molecular Medicine</i> , 2015, 7, 275-287.	3.3	61
77	Substrate Recognition by AAA + ATPases: Distinct Substrate Binding Modes in ATP-Dependent Protease Yme1 of the Mitochondrial Intermembrane Space. <i>Molecular and Cellular Biology</i> , 2007, 27, 2476-2485.	1.1	60
78	Dynamic survey of mitochondria by ubiquitin. <i>EMBO Reports</i> , 2014, 15, 231-243.	2.0	55
79	Electron Cryomicroscopy Structure of a Membrane-anchored Mitochondrial AAA Protease. <i>Journal of Biological Chemistry</i> , 2011, 286, 4404-4411.	1.6	54
80	Impaired Folding of the Mitochondrial Small TIM Chaperones Induces Clearance by the i-AAA Protease. <i>Journal of Molecular Biology</i> , 2012, 424, 227-239.	2.0	52
81	The Mitochondrial Electron Transport Chain Is Dispensable for Proliferation and Differentiation of Epidermal Progenitor Cells. <i>Stem Cells</i> , 2011, 29, 1459-1468.	1.4	51
82	Evidence for a novel mitochondria-to-nucleus signalling pathway in respiring cells lacking i-AAA protease and the ABC-transporter Mdl1. <i>Gene</i> , 2006, 367, 74-88.	1.0	47
83	Autocatalytic Processing of m-AAA Protease Subunits in Mitochondria. <i>Molecular Biology of the Cell</i> , 2009, 20, 4216-4224.	0.9	45
84	Mitochondrial lipid transport at a glance. <i>Journal of Cell Science</i> , 2013, 126, 5317-23.	1.2	45
85	Metabolism and Innate Immunity Meet at the Mitochondria. <i>Frontiers in Cell and Developmental Biology</i> , 2021, 9, 720490.	1.8	43
86	Functional evaluation of paraplegin mutations by a yeast complementation assay. <i>Human Mutation</i> , 2010, 31, n/a-n/a.	1.1	42
87	ROMO1 is a constituent of the human presequence translocase required for YME1L protease import. <i>Journal of Cell Biology</i> , 2019, 218, 598-614.	2.3	40
88	SPG7 Variant Escapes Phosphorylation-Regulated Processing by AFG3L2, Elevates Mitochondrial ROS, and Is Associated with Multiple Clinical Phenotypes. <i>Cell Reports</i> , 2014, 7, 834-847.	2.9	39
89	Structural determinants of lipid specificity within Ups/PRELI lipid transfer proteins. <i>Nature Communications</i> , 2019, 10, 1130.	5.8	39
90	Loss of the mitochondrial i-AAA protease YME1L leads to ocular dysfunction and spinal axonopathy. <i>EMBO Molecular Medicine</i> , 2019, 11, .	3.3	38

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91	Astrocyte-specific deletion of the mitochondrial <i>mAAA</i> protease reveals glial contribution to neurodegeneration. <i>Glia</i> , 2019, 67, 1526-1541.	2.5	36
92	Lipin1 deficiency causes sarcoplasmic reticulum stress and chaperone-responsive myopathy. <i>EMBO Journal</i> , 2019, 38, .	3.5	34
93	High-throughput screening identifies suppressors of mitochondrial fragmentation in <i>OPA1</i> fibroblasts. <i>EMBO Molecular Medicine</i> , 2021, 13, e13579.	3.3	33
94	Regulation of mitochondrial plasticity by the <i>iAAA</i> protease YME1L. <i>Biological Chemistry</i> , 2020, 401, 877-890.	1.2	32
95	MAP-1 and IAP-1, Two Novel AAA Proteases with Catalytic Sites on Opposite Membrane Surfaces in Mitochondrial Inner Membrane of <i>Neurospora crassa</i> . <i>Molecular Biology of the Cell</i> , 2001, 12, 2858-2869.	0.9	31
96	Deficiency of HTRA2/Omi is associated with infantile neurodegeneration and 3-methylglutaconic aciduria. <i>Journal of Medical Genetics</i> , 2016, 53, 690-696.	1.5	30
97	Prohibitins. <i>Current Biology</i> , 2017, 27, R629-R631.	1.8	29
98	A novel prohibitin-binding compound induces the mitochondrial apoptotic pathway through NOXA and BIM upregulation. <i>Oncotarget</i> , 2015, 6, 41750-41765.	0.8	29
99	StAR Enhances Transcription of Genes Encoding the Mitochondrial Proteases Involved in Its Own Degradation. <i>Molecular Endocrinology</i> , 2014, 28, 208-224.	3.7	28
100	Reversible Assembly of the ATP-binding Cassette Transporter Mdl1 with the F1F0-ATP Synthase in Mitochondria. <i>Journal of Biological Chemistry</i> , 2004, 279, 38338-38345.	1.6	24
101	Transcriptional activation of LON Gene by a new form of mitochondrial stress: A role for the nuclear respiratory factor 2 in StAR overload response (SOR). <i>Molecular and Cellular Endocrinology</i> , 2015, 408, 62-72.	1.6	24
102	Metabolic control of adult neural stem cell self-renewal by the mitochondrial protease YME1L. <i>Cell Reports</i> , 2022, 38, 110370.	2.9	24
103	Substrate specific consequences of central pore mutations in the <i>iAAA</i> protease Yme1 on substrate engagement. <i>Journal of Structural Biology</i> , 2006, 156, 101-108.	1.3	23
104	Mitochondrial shaping cuts. <i>Biochimica Et Biophysica Acta - Molecular Cell Research</i> , 2006, 1763, 422-429.	1.9	23
105	The Mitochondrial <i>m-AAA</i> Protease Prevents Demyelination and Hair Greying. <i>PLoS Genetics</i> , 2016, 12, e1006463.	1.5	23
106	Mitochondrial Proteolysis and Metabolic Control. <i>Cold Spring Harbor Perspectives in Biology</i> , 2019, 11, a033936.	2.3	22
107	Studying Proteolysis Within Mitochondria. <i>Methods in Molecular Biology</i> , 2007, 372, 343-360.	0.4	22
108	Interaction of MDM33 with mitochondrial inner membrane homeostasis pathways in yeast. <i>Scientific Reports</i> , 2016, 5, 18344.	1.6	20

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109	The ER protein Ema19 facilitates the degradation of nonimported mitochondrial precursor proteins. <i>Molecular Biology of the Cell</i> , 2021, 32, 664-674.	0.9	18
110	Defining the interactome of the human mitochondrial ribosome identifies SMIM4 and TMEM223 as respiratory chain assembly factors. <i>ELife</i> , 2021, 10, .	2.8	15
111	The C-terminal region of the oxidoreductase MIA40 stabilizes its cytosolic precursor during mitochondrial import. <i>BMC Biology</i> , 2020, 18, 96.	1.7	14
112	An atypical form of AOA2 with myoclonus associated with mutations in SETX and AFG3L2. <i>BMC Medical Genetics</i> , 2015, 16, 16.	2.1	12
113	Disturbed intramitochondrial phosphatidic acid transport impairs cellular stress signaling. <i>Journal of Biological Chemistry</i> , 2021, 296, 100335.	1.6	10
114	Phosphoproteomics of the developing heart identifies PERM1 - An outer mitochondrial membrane protein. <i>Journal of Molecular and Cellular Cardiology</i> , 2021, 154, 41-59.	0.9	9
115	CLUH controls astrin-1 expression to couple mitochondrial metabolism to cell cycle progression. <i>ELife</i> , 2022, 11, .	2.8	7
116	ComplexFinder: A software package for the analysis of native protein complex fractionation experiments. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2021, 1862, 148444.	0.5	6
117	The mitochondrial intermembrane space-facing proteins Mcp2 and Tgl2 are involved in yeast lipid metabolism. <i>Molecular Biology of the Cell</i> , 2019, 30, 2681-2694.	0.9	5
118	Protein Import Assay into Mitochondria Isolated from Human Cells. <i>Bio-protocol</i> , 2021, 11, e4057.	0.2	5
119	Mechanometabolism: Mitochondria promote resilience under pressure. <i>Current Biology</i> , 2021, 31, R859-R861.	1.8	4
120	The i-AAA Protease. , 2013, , 696-701.		2
121	Walter Neupert (1939â€“2019), a pioneer of mitochondrial biogenesis and morphology. <i>EMBO Journal</i> , 2019, 38, e103100.	3.5	0
122	ATP23 Peptidase. , 2013, , 1688-1690.		0
123	Loss of OMA1 delays neurodegeneration by preventing stress-induced OPA1 processing in mitochondria. <i>Journal of Experimental Medicine</i> , 2016, 213, 2132OIA1.	4.2	0