Thomas Langer

List of Publications by Year
in descending order

123 papers	16,604 citations	13865 67 h-index	18647 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.	7.1	922
2	SLP-2 is required for stress-induced mitochondrial hyperfusion. EMBO Journal, 2009, 28, 1589-1600.	7.8	639
3	The i-AAA protease YME1L and OMA1 cleave OPA1 to balance mitochondrial fusion and fission. Journal of Cell Biology, 2014, 204, 919-929.	5.2	603
4	Regulation of OPA1 processing and mitochondrial fusion by m-AAA protease isoenzymes and OMA1. Journal of Cell Biology, 2009, 187, 1023-1036.	5.2	500
5	Making heads or tails of phospholipids in mitochondria. Journal of Cell Biology, 2011, 192, 7-16.	5.2	497
6	Quality control of mitochondria: protection against neurodegeneration and ageing. EMBO Journal, 2008, 27, 306-314.	7.8	475
7	Prohibitins control cell proliferation and apoptosis by regulating OPA1-dependent cristae morphogenesis in mitochondria. Genes and Development, 2008, 22, 476-488.	5.9	454
8	New roles for mitochondrial proteases in health, ageing and disease. Nature Reviews Molecular Cell Biology, 2015, 16, 345-359.	37.0	453
9	Imbalanced OPA1 processing and mitochondrial fragmentation cause heart failure in mice. Science, 2015, 350, aad0116.	12.6	403
10	The m-AAA Protease Defective in Hereditary Spastic Paraplegia Controls Ribosome Assembly in Mitochondria. Cell, 2005, 123, 277-289.	28.9	344
11	Mitochondrial quality control: a matter of life and death for neurons. EMBO Journal, 2012, 31, 1336-1349.	7.8	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.	4.1	332
13	OPA1 processing in cell death and disease â€“ the long and short of it. Journal of Cell Science, 2016, 129, 2297-306.	2.0	306
14	The YTA10â€“12 Complex, an AAA Protease with Chaperone-like Activity in the Inner Membrane of Mitochondria. Cell, 1996, 85, 875-885.	28.9	301
15	Prohibitins Regulate Membrane Protein Degradation by the m-AAA Protease in Mitochondria. Molecular and Cellular Biology, 1999, 19, 3435-3442.	2.3	300
16	Mutations in the mitochondrial protease gene AFG3L2 cause dominant hereditary ataxia SCA28. Nature Genetics, 2010, 42, 313-321.	21.4	291
17	Formation of Membrane-bound Ring Complexes by Prohibitins in Mitochondria. Molecular Biology of the Cell, 2005, 16, 248-259.	2.1	284
18	Prohibitins and the functional compartmentalization of mitochondrial membranes. Journal of Cell Science, 2009, 122, 3823-3830.	2.0	267

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19	The genetic interactome of prohibitins: coordinated control of cardiolipin and phosphatidylethanolamine by conserved regulators in mitochondria. Journal of Cell Biology, 2009, 184, 583-596.	5.2	265
20	Stress-induced OMA1 activation and autocatalytic turnover regulate OPA1-dependent mitochondrial dynamics. EMBO Journal, 2014, 33, 578-593.	7.8	246
21	Loss of m-AAA protease in mitochondria causes complex I deficiency and increased sensitivity to oxidative stress in hereditary spastic paraplegia. Journal of Cell Biology, 2003, 163, 777-787.	5.2	241
22	Protein Degradation within Mitochondria: Versatile Activities of AAA Proteases and Other Peptidases. Critical Reviews in Biochemistry and Molecular Biology, 2007, 42, 221-242.	5.2	228
23	Quality Control of Mitochondrial Proteostasis. Cold Spring Harbor Perspectives in Biology, 2011, 3, a007559-a007559.	5.5	220
24	Mitochondrial lipid trafficking. Trends in Cell Biology, 2014, 24, 44-52.	7.9	212
25	Chaperone-like activity of the AAA domain of the yeast Yme1 AAA protease. Nature, 1999, 398, 348-351.	27.8	210
26	AAA proteases: cellular machines for degrading membrane proteins. Trends in Biochemical Sciences, 2000, 25, 247-251.	7.5	206
27	Intramitochondrial Transport of Phosphatidic Acid in Yeast by a Lipid Transfer Protein. Science, 2012, 338, 815-818.	12.6	206
28	Role of the ABC Transporter Mdl1 in Peptide Export from Mitochondria. Science, 2001, 291, 2135-2138.	12.6	200
29	Whole-Exome Sequencing Identifies Homozygous AFG3L2 Mutations in a Spastic Ataxia-Neuropathy Syndrome Linked to Mitochondrial m-AAA Proteases. PLoS Genetics, 2011, 7, e1002325.	3.5	200
30	Membrane Protein Degradation by AAA Proteases in Mitochondria. Molecular Cell, 2000, 5, 629-638.	9.7	190
31	The E3 Ligase Parkin Maintains Mitochondrial Integrity by Increasing Linear Ubiquitination of NEMO. Molecular Cell, 2013, 49, 908-921.	9.7	183
32	CerS6-Derived Sphingolipids Interact with Mff and Promote Mitochondrial Fragmentation in Obesity. Cell, 2019, 177, 1536-1552.e23.	28.9	183
33	Variable and Tissue-Specific Subunit Composition of Mitochondrial m -AAA Protease Complexes Linked to Hereditary Spastic Paraplegia. Molecular and Cellular Biology, 2007, 27, 758-767.	2.3	172
34	TRIAP1/PRELI Complexes Prevent Apoptosis by Mediating Intramitochondrial Transport of Phosphatidic Acid. Cell Metabolism, 2013, 18, 287-295.	16.2	167
35	OPA1 Processing Reconstituted in Yeast Depends on the Subunit Composition of the m-AAA Protease in Mitochondria. Molecular Biology of the Cell, 2007, 18, 3582-3590.	2.1	162
36	DNAJC19, a Mitochondrial Cochaperone Associated with Cardiomyopathy, Forms a Complex with Prohibitins to Regulate Cardiolipin Remodeling. Cell Metabolism, 2014, 20, 158-171.	16.2	157

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37	Loss of Prohibitin Membrane Scaffolds Impairs Mitochondrial Architecture and Leads to Tau Hyperphosphorylation and Neurodegeneration. PLoS Genetics, 2012, 8, e1003021.	3.5	154
38	The m -AAA Protease Associated with Neurodegeneration Limits MCU Activity in Mitochondria. Molecular Cell, 2016, 64, 148-162.	9.7	153
39	Regulation of mitochondrial phospholipids by Ups1/PRELI-like proteins depends on proteolysis and Mdm35. EMBO Journal, 2010, 29, 2888-2898.	7.8	150
40	The membrane scaffold SLP2 anchors a proteolytic hub in mitochondria containing PARL and the i â€AAA protease YME1L. EMBO Reports, 2016, 17, 1844-1856.	4.5	142
41	MICOS and phospholipid transfer by Ups2â€“Mdm35 organize membrane lipid synthesis in mitochondria. Journal of Cell Biology, 2016, 213, 525-534.	5.2	136
42	Oma1, a Novel Membrane-bound Metallopeptidase in Mitochondria with Activities Overlapping with the m-AAA Protease. Journal of Biological Chemistry, 2003, 278, 46414-46423.	3.4	135
43	Membrane protein degradation by AAA proteases in mitochondria. Biochimica Et Biophysica Acta - Molecular Cell Research, 2002, 1592, 89-96.	4.1	131
44	Prohibitins Interact Genetically with Atp23, a Novel Processing Peptidase and Chaperone for the F1FO-ATP Synthase. Molecular Biology of the Cell, 2007, 18, 627-635.	2.1	124
45	Mitochondrial Proteases: Multifaceted Regulators of Mitochondrial Plasticity. Annual Review of Biochemistry, 2020, 89, 501-528.	11.1	124
46	The Good and the Bad of Mitochondrial Breakups. Trends in Cell Biology, 2019, 29, 888-900.	7.9	122
47	A mitochondrial phosphatase required for cardiolipin biosynthesis: the PGP phosphatase Gep4. EMBO Journal, 2010, 29, 1976-1987.	7.8	121
48	Lipid signalling drives proteolytic rewiring of mitochondria by YME1L. Nature, 2019, 575, 361-365.	27.8	116
49	Loss of OMA1 delays neurodegeneration by preventing stress-induced OPA1 processing in mitochondria. Journal of Cell Biology, 2016, 212, 157-166.	5.2	115
50	PARL mediates Smac proteolytic maturation in mitochondria to promote apoptosis. Nature Cell Biology, 2017, 19, 318-328.	10.3	111
51	Mitochondrial AAA proteases â€” Towards a molecular understanding of membrane-bound proteolytic machines. Biochimica Et Biophysica Acta - Molecular Cell Research, 2012, 1823, 49-55.	4.1	107
52	MIROs and DRP1 drive mitochondrial-derived vesicle biogenesis and promote quality control. Nature Cell Biology, 2021, 23, 1271-1286.	10.3	105
53	Acylglycerol Kinase Mutated in Sengers Syndrome Is a Subunit of the TIM22 Protein Translocase in Mitochondria. Molecular Cell, 2017, 67, 471-483.e7.	9.7	104
54	m-AAA protease-driven membrane dislocation allows intramembrane cleavage by rhomboid in mitochondria. EMBO Journal, 2007, 26, 325-335.	7.8	100

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55	An Intersubunit Signaling Network Coordinates ATP Hydrolysis by m-AAA Proteases. Molecular Cell, 2009, 35, 574-585.	9.7	96
56	AAA proteases of mitochondria: quality control of membrane proteins and regulatory functions during mitochondrial biogenesis. Biochemical Society Transactions, 2001, 29, 431-436.	3.4	91
57	Intramitochondrial phospholipid trafficking. Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids, 2017, 1862, 81-89.	2.4	90
58	AFG3L2 supports mitochondrial protein synthesis and Purkinje cell survival. Journal of Clinical Investigation, 2012, 122, 4048-4058.	8.2	90
59	Mitochondrial metabolism coordinates stage-specific repair processes in macrophages during wound healing. Cell Metabolism, 2021, 33, 2398-2414.e9.	16.2	89
60	Homozygous YME1L1 mutation causes mitochondriopathy with optic atrophy and mitochondrial network fragmentation. ELife, 2016, 5, .	6.0	88
61	Characterization of Peptides Released from Mitochondria. Journal of Biological Chemistry, 2005, 280, 2691-2699.	3.4	87
62	Proteolytic control of mitochondrial function and morphogenesis. Biochimica Et Biophysica Acta - Molecular Cell Research, 2013, 1833, 195-204.	4.1	86
63	Organization of Mitochondrial Gene Expression in Two Distinct Ribosome-Containing Assemblies. Cell Reports, 2015, 10, 843-853.	6.4	86
64	m-AAA proteases, mitochondrial calcium homeostasis and neurodegeneration. Cell Research, 2018, 28, 296-306.	12.0	86
65	Food Perception Primes Hepatic ER Homeostasis via Melanocortin-Dependent Control of mTOR Activation. Cell, 2018, 175, 1321-1335.e20.	28.9	86
66	A nutritional memory effect counteracts the benefits of dietary restriction in old mice. Nature Metabolism, 2019, 1, 1059-1073.	11.9	80
67	AAA proteases in mitochondria: diverse functions of membrane-bound proteolytic machines. Research in Microbiology, 2009, 160, 711-717.	2.1	79
68	Role of the Novel Metallopeptidase MoP112 and Saccharolysin for the Complete Degradation of Proteins Residing in Different Subcompartments of Mitochondria. Journal of Biological Chemistry, 2005, 280, 20132-20139.	3.4	77
69	Loss of Prohibitin Induces Mitochondrial Damages Altering Î²-Cell Function and Survival and Is Responsible for Gradual Diabetes Development. Diabetes, 2013, 62, 3488-3499.	0.6	76
70	PARL partitions the lipid transfer protein STARD7 between the cytosol and mitochondria. EMBO Journal, 2018, 37, .	7.8	75
71	Presequence-dependent folding ensures MrpL32 processing by them-AAA protease in mitochondria. EMBO Journal, 2011, 30, 2545-2556.	7.8	68
72	Structural insight into the <scp>TRIAP</scp> 1/ <scp>PRELI</scp> â€like domain family of mitochondrial phospholipid transfer complexes. EMBO Reports, 2015, 16, 824-835.	4.5	68

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73	Stomatin-Like Protein 2 Is Required for In Vivo Mitochondrial Respiratory Chain Supercomplex Formation and Optimal Cell Function. Molecular and Cellular Biology, 2015, 35, 1838-1847.	2.3	67
74	Cellular pyrimidine imbalance triggers mitochondrial DNAâ€“dependent innate immunity. Nature Metabolism, 2021, 3, 636-650.	11.9	64
75	Loss of the m-AAA protease subunit AFG3L2 causes mitochondrial transport defects and tau hyperphosphorylation. EMBO Journal, 2014, 33, 1011-1026.	7.8	62
76	Inhibition of insulin/<scp>IGF</scp>â€1 receptor signaling protects from mitochondriaâ€mediated kidneyÂfailure. EMBO Molecular Medicine, 2015, 7, 275-287.	6.9	61
77	Substrate Recognition by AAA + ATPases: Distinct Substrate Binding Modes in ATP-Dependent Protease Yme1 of the Mitochondrial Intermembrane Space. Molecular and Cellular Biology, 2007, 27, 2476-2485.	2.3	60
78	Dynamic survey of mitochondria by ubiquitin. EMBO Reports, 2014, 15, 231-243.	4.5	55
79	Electron Cryomicroscopy Structure of a Membrane-anchored Mitochondrial AAA Protease. Journal of Biological Chemistry, 2011, 286, 4404-4411.	3.4	54
80	Impaired Folding of the Mitochondrial Small TIM Chaperones Induces Clearance by the i-AAA Protease. Journal of Molecular Biology, 2012, 424, 227-239.	4.2	52
81	The Mitochondrial Electron Transport Chain Is Dispensable for Proliferation and Differentiation of Epidermal Progenitor Cells. Stem Cells, 2011, 29, 1459-1468.	3.2	51
82	Evidence for a novel mitochondria-to-nucleus signalling pathway in respiring cells lacking i-AAA protease and the ABC-transporter Mdl1. Gene, 2006, 367, 74-88.	2.2	47
83	Autocatalytic Processing of m-AAA Protease Subunits in Mitochondria. Molecular Biology of the Cell, 2009, 20, 4216-4224.	2.1	45
84	Mitochondrial lipid transport at a glance. Journal of Cell Science, 2013, 126, 5317-23.	2.0	45
85	Metabolism and Innate Immunity Meet at the Mitochondria. Frontiers in Cell and Developmental Biology, 2021, 9, 720490.	3.7	43
86	Functional evaluation of paraplegin mutations by a yeast complementation assay. Human Mutation, 2010, 31, n/a-n/a.	2.5	42
87	ROMO1 is a constituent of the human presequence translocase required for YME1L protease import. Journal of Cell Biology, 2019, 218, 598-614.	5.2	40
88	SPG7 Variant Escapes Phosphorylation-Regulated Processing by AFG3L2, Elevates Mitochondrial ROS, and Is Associated with Multiple Clinical Phenotypes. Cell Reports, 2014, 7, 834-847.	6.4	39
89	Structural determinants of lipid specificity within Ups/PRELI lipid transfer proteins. Nature Communications, 2019, 10, 1130.	12.8	39
90	Loss of the mitochondrial i â€•<scp>AAA</scp> protease <scp>YME</scp> 1L leads to ocular dysfunction and spinal axonopathy. EMBO Molecular Medicine, 2019, 11, .	6.9	38

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91	Astrocyteâ€specific deletion of the mitochondrial mâ€AAA protease reveals glial contribution to neurodegeneration. Glia, 2019, 67, 1526-1541.	4.9	36
92	Lipin1 deficiency causes sarcoplasmic reticulum stress and chaperoneâ€responsive myopathy. EMBO Journal, 2019, 38, .	7.8	34
93	Highâ€throughput screening identifies suppressors of mitochondrial fragmentation in OPA1 fibroblasts. EMBO Molecular Medicine, 2021, 13, e13579.	6.9	33
94	Regulation of mitochondrial plasticity by the i-AAA protease YME1L. Biological Chemistry, 2020, 401, 877-890.	2.5	32
95	MAP-1 and IAP-1, Two Novel AAA Proteases with Catalytic Sites on Opposite Membrane Surfaces in Mitochondrial Inner Membrane ofNeurospora crassa. Molecular Biology of the Cell, 2001, 12, 2858-2869.	2.1	31
96	Deficiency of HTRA2/Omi is associated with infantile neurodegeneration and 3-methylglutaconic aciduria. Journal of Medical Genetics, 2016, 53, 690-696.	3.2	30
97	Prohibitins. Current Biology, 2017, 27, R629-R631.	3.9	29
98	A novel prohibitin-binding compound induces the mitochondrial apoptotic pathway through NOXA and BIM upregulation. Oncotarget, 2015, 6, 41750-41765.	1.8	29
99	StAR Enhances Transcription of Genes Encoding the Mitochondrial Proteases Involved in Its Own Degradation. Molecular Endocrinology, 2014, 28, 208-224.	3.7	28
100	Reversible Assembly of the ATP-binding Cassette Transporter Mdl1 with the F1F0-ATP Synthase in Mitochondria. Journal of Biological Chemistry, 2004, 279, 38338-38345.	3.4	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). Molecular and Cellular Endocrinology, 2015, 408, 62-72.	3.2	24
102	Metabolic control of adult neural stem cell self-renewal by the mitochondrial protease YME1L. Cell Reports, 2022, 38, 110370.	6.4	24
103	Substrate specific consequences of central pore mutations in the i-AAA protease Yme1 on substrate engagement. Journal of Structural Biology, 2006, 156, 101-108.	2.8	23
104	Mitochondrial shaping cuts. Biochimica Et Biophysica Acta - Molecular Cell Research, 2006, 1763, 422-429.	4.1	23
105	The Mitochondrial m-AAA Protease Prevents Demyelination and Hair Greying. PLoS Genetics, 2016, 12, e1006463.	3.5	23
106	Mitochondrial Proteolysis and Metabolic Control. Cold Spring Harbor Perspectives in Biology, 2019, 11, a033936.	5.5	22
107	Studying Proteolysis Within Mitochondria. Methods in Molecular Biology, 2007, 372, 343-360.	0.9	22
108	Interaction of MDM33 with mitochondrial inner membrane homeostasis pathways in yeast. Scientific Reports, 2016, 5, 18344.	3.3	20

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109	The ER protein Ema19 facilitates the degradation of nonimported mitochondrial precursor proteins. Molecular Biology of the Cell, 2021, 32, 664-674.	2.1	18
110	Defining the interactome of the human mitochondrial ribosome identifies SMIM4 and TMEM223 as respiratory chain assembly factors. ELife, 2021, 10, .	6.0	15
111	The C-terminal region of the oxidoreductase MIA40 stabilizes its cytosolic precursor during mitochondrial import. BMC Biology, 2020, 18, 96.	3.8	14
112	An atypical form of AOA2 with myoclonus associated with mutations in SETX and AFG3L2. BMC Medical Genetics, 2015, 16, 16.	2.1	12
113	Disturbed intramitochondrial phosphatidic acid transport impairs cellular stress signaling. Journal of Biological Chemistry, 2021, 296, 100335.	3.4	10
114	Phosphoproteomics of the developing heart identifies PERM1 - An outer mitochondrial membrane protein. Journal of Molecular and Cellular Cardiology, 2021, 154, 41-59.	1.9	9
115	CLUH controls astrin-1 expression to couple mitochondrial metabolism to cell cycle progression. ELife, 2022, 11, .	6.0	7
116	ComplexFinder: A software package for the analysis of native protein complex fractionation experiments. Biochimica Et Biophysica Acta - Bioenergetics, 2021, 1862, 148444.	1.0	6
117	The mitochondrial intermembrane spaceâ€“facing proteins Mcp2 and Tgl2 are involved in yeast lipid metabolism. Molecular Biology of the Cell, 2019, 30, 2681-2694.	2.1	5
118	Protein Import Assay into Mitochondria Isolated from Human Cells. Bio-protocol, 2021, 11, e4057.	0.4	5
119	Mechanometabolism: Mitochondria promote resilience under pressure. Current Biology, 2021, 31, R859-R861.	3.9	4
120	The i-AAA Protease. , 2013, , 696-701.		2
121	Walter Neupert (1939â€“2019), a pioneer of mitochondrial biogenesis and morphology. EMBO Journal, 2019, 38, e103100.	7.8	0
122	ATP23 Peptidase. , 2013, , 1688-1690.		0
123	Loss of OMA1 delays neurodegeneration by preventing stress-induced OPA1 processing in mitochondria. Journal of Experimental Medicine, 2016, 213, 2132OIA1.	8.5	0