

# Peter Walter

## List of Publications by Year in descending order

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133  
papers

70,939  
citations

13827

67  
h-index

12910

131  
g-index

179  
all docs

179  
docs citations

179  
times ranked

93746  
citing authors

#	ARTICLE	IF	CITATIONS
1	Oligomerization and phosphorylation of the Ire1p kinase during intracellular signaling from the endoplasmic reticulum to the nucleus.. EMBO Journal, 1996, 15, 3028-3039.	3.5	35,118
2	Signal integration in the endoplasmic reticulum unfolded protein response. Nature Reviews Molecular Cell Biology, 2007, 8, 519-529.	16.1	5,491
3	The Unfolded Protein Response: From Stress Pathway to Homeostatic Regulation. Science, 2011, 334, 1081-1086.	6.0	4,768
4	Functional and Genomic Analyses Reveal an Essential Coordination between the Unfolded Protein Response and ER-Associated Degradation. Cell, 2000, 101, 249-258.	13.5	1,777
5	IRE1 Signaling Affects Cell Fate During the Unfolded Protein Response. Science, 2007, 318, 944-949.	6.0	1,221
6	Transcriptional induction of genes encoding endoplasmic reticulum resident proteins requires a transmembrane protein kinase. Cell, 1993, 73, 1197-1206.	13.5	1,101
7	A Novel Mechanism for Regulating Activity of a Transcription Factor That Controls the Unfolded Protein Response. Cell, 1996, 87, 391-404.	13.5	923
8	Regulated Ire1-dependent decay of messenger RNAs in mammalian cells. Journal of Cell Biology, 2009, 186, 323-331.	2.3	841
9	The Transmembrane Kinase Ire1p Is a Site-Specific Endonuclease That Initiates mRNA Splicing in the Unfolded Protein Response. Cell, 1997, 90, 1031-1039.	13.5	799
10	Protein translocation across the endoplasmic reticulum. Cell, 1984, 38, 5-8.	13.5	758
11	The integrated stress response: From mechanism to disease. Science, 2020, 368, .	6.0	715
12	Comprehensive Characterization of Genes Required for Protein Folding in the Endoplasmic Reticulum. Science, 2009, 323, 1693-1697.	6.0	646
13	Endoplasmic Reticulum Stress in Disease Pathogenesis. Annual Review of Pathology: Mechanisms of Disease, 2008, 3, 399-425.	9.6	637
14	Endoplasmic Reticulum Stress Sensing in the Unfolded Protein Response. Cold Spring Harbor Perspectives in Biology, 2013, 5, a013169-a013169.	2.3	614
15	Unfolded Proteins Are Ire1-Activating Ligands That Directly Induce the Unfolded Protein Response. Science, 2011, 333, 1891-1894.	6.0	579
16	The unfolded protein response signals through high-order assembly of Ire1. Nature, 2009, 457, 687-693.	13.7	565
17	The Signal Recognition Particle. Annual Review of Biochemistry, 2001, 70, 755-775.	5.0	541
18	Pharmacological brake-release of mRNA translation enhances cognitive memory. ELife, 2013, 2, e00498.	2.8	541

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19	On the mechanism of sensing unfolded protein in the endoplasmic reticulum. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 18773-18784.	3.3	465
20	Opposing unfolded-protein-response signals converge on death receptor 5 to control apoptosis. Science, 2014, 345, 98-101.	6.0	465
21	The small molecule ISRIB reverses the effects of eIF2 $\gamma$ phosphorylation on translation and stress granule assembly. ELife, 2015, 4, .	2.8	464
22	Mitochondrial transmission during mating in <i>Saccharomyces cerevisiae</i> is determined by mitochondrial fusion and fission and the intramitochondrial segregation of mitochondrial DNA.. Molecular Biology of the Cell, 1997, 8, 1233-1242.	0.9	452
23	Membrane expansion alleviates endoplasmic reticulum stress independently of the unfolded protein response. Journal of Cell Biology, 2009, 187, 525-536.	2.3	451
24	tRNA Ligase Is Required for Regulated mRNA Splicing in the Unfolded Protein Response. Cell, 1996, 87, 405-413.	13.5	401
25	BiP Binding to the ER-Stress Sensor Ire1 Tunes the Homeostatic Behavior of the Unfolded Protein Response. PLoS Biology, 2010, 8, e1000415.	2.6	369
26	Regulation of Ribosome Biogenesis by the Rapamycin-sensitive TOR-signaling Pathway in <i>Saccharomyces cerevisiae</i> . Molecular Biology of the Cell, 1999, 10, 987-1000.	0.9	364
27	An ultrapotent synthetic nanobody neutralizes SARS-CoV-2 by stabilizing inactive Spike. Science, 2020, 370, 1473-1479.	6.0	336
28	Translation from the 5' untranslated region shapes the integrated stress response. Science, 2016, 351, aad3867.	6.0	305
29	Mammalian endoplasmic reticulum stress sensor IRE1 signals by dynamic clustering. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 16113-16118.	3.3	302
30	Messenger RNA targeting to endoplasmic reticulum stress signalling sites. Nature, 2009, 457, 736-740.	13.7	297
31	A Role for Presenilin-1 in Nuclear Accumulation of Ire1 Fragments and Induction of the Mammalian Unfolded Protein Response. Cell, 1999, 99, 691-702.	13.5	285
32	Block of HAC1 mRNA Translation by Long-Range Base Pairing Is Released by Cytoplasmic Splicing upon Induction of the Unfolded Protein Response. Cell, 2001, 107, 103-114.	13.5	282
33	BAX Inhibitor-1 Is a Negative Regulator of the ER Stress Sensor IRE1 $\gamma$ . Molecular Cell, 2009, 33, 679-691.	4.5	281
34	Oligomerization and phosphorylation of the Ire1p kinase during intracellular signaling from the endoplasmic reticulum to the nucleus. EMBO Journal, 1996, 15, 3028-39.	3.5	263
35	INTRACELLULAR SIGNALING FROM THE ENDOPLASMIC RETICULUM TO THE NUCLEUS. Annual Review of Cell and Developmental Biology, 1998, 14, 459-485.	4.0	230
36	Structure of the conserved GTPase domain of the signal recognition particle. Nature, 1997, 385, 361-364.	13.7	228

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37	ER-phagy mediates selective degradation of endoplasmic reticulum independently of the core autophagy machinery. <i>Journal of Cell Science</i> , 2014, 127, 4078-88.	1.2	221
38	Bypassing a Kinase Activity with an ATP-Competitive Drug. <i>Science</i> , 2003, 302, 1533-1537.	6.0	213
39	Pharmacological dimerization and activation of the exchange factor eIF2B antagonizes the integrated stress response. <i>ELife</i> , 2015, 4, e07314.	2.8	212
40	ER-mitochondrial junctions can be bypassed by dominant mutations in the endosomal protein Vps13. <i>Journal of Cell Biology</i> , 2015, 210, 883-890.	2.3	203
41	The Unfolded Protein Response: Detecting and Responding to Fluctuations in the Protein-Folding Capacity of the Endoplasmic Reticulum. <i>Cold Spring Harbor Perspectives in Biology</i> , 2019, 11, a033886.	2.3	202
42	Mechanism of non-spliceosomal mRNA splicing in the unfolded protein response pathway. <i>EMBO Journal</i> , 1999, 18, 3119-3132.	3.5	199
43	Structural Basis of the Unfolded Protein Response. <i>Annual Review of Cell and Developmental Biology</i> , 2012, 28, 251-277.	4.0	186
44	Small molecule proteostasis regulators that reprogram the ER to reduce extracellular protein aggregation. <i>ELife</i> , 2016, 5, .	2.8	185
45	Inhibition of the integrated stress response reverses cognitive deficits after traumatic brain injury. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, E6420-E6426.	3.3	177
46	Removal of the Alu structural domain from signal recognition particle leaves its protein translocation activity intact. <i>Nature</i> , 1986, 320, 81-84.	13.7	176
47	The conserved AAA-ATPase Msp1 confers organelle specificity to tail-anchored proteins. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 8019-8024.	3.3	175
48	Small molecule ISRIB suppresses the integrated stress response within a defined window of activation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 2097-2102.	3.3	163
49	An unfolded protein-induced conformational switch activates mammalian IRE1. <i>ELife</i> , 2017, 6, .	2.8	160
50	Translational control of mGluR-dependent long-term depression and object-place learning by eIF2 $\beta$ . <i>Nature Neuroscience</i> , 2014, 17, 1073-1082.	7.1	159
51	Targeting IRE1 with small molecules counteracts progression of atherosclerosis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, E1395-E1404.	3.3	157
52	Topology of signal recognition particle receptor in endoplasmic reticulum membrane. <i>Nature</i> , 1985, 318, 334-338.	13.7	150
53	Ceapins are a new class of unfolded protein response inhibitors, selectively targeting the ATF6 $\beta$ branch. <i>ELife</i> , 2016, 5, .	2.8	144
54	Structure of the nucleotide exchange factor eIF2B reveals mechanism of memory-enhancing molecule. <i>Science</i> , 2018, 359, .	6.0	143

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55	Role of 4.5S RNA in Assembly of the Bacterial Signal Recognition Particle with Its Receptor. <i>Science</i> , 2000, 288, 1640-1643.	6.0	142
56	Homeostatic adaptation to endoplasmic reticulum stress depends on Ire1 kinase activity. <i>Journal of Cell Biology</i> , 2011, 193, 171-184.	2.3	140
57	Development of a stress response therapy targeting aggressive prostate cancer. <i>Science Translational Medicine</i> , 2018, 10, .	5.8	124
58	The unfolded protein response in fission yeast modulates stability of select mRNAs to maintain protein homeostasis. <i>ELife</i> , 2012, 1, e00048.	2.8	118
59	Activation of the ISR mediates the behavioral and neurophysiological abnormalities in Down syndrome. <i>Science</i> , 2019, 366, 843-849.	6.0	117
60	Chaperones inhibit ATF6 $\beta$ signaling by selectively preventing transport of ATF6 $\beta$ to the Golgi apparatus during ER stress. <i>ELife</i> , 2016, 5, .	2.8	107
61	BAX inhibitor-1 regulates autophagy by controlling the IRE1 $\beta$ branch of the unfolded protein response. <i>EMBO Journal</i> , 2011, 30, 4465-4478.	3.5	105
62	Validation of the Hsp70 $\alpha$ -Bag3 Protein $\alpha$ -Protein Interaction as a Potential Therapeutic Target in Cancer. <i>Molecular Cancer Therapeutics</i> , 2015, 14, 642-648.	1.9	105
63	eIF2B-catalyzed nucleotide exchange and phosphoregulation by the integrated stress response. <i>Science</i> , 2019, 364, 491-495.	6.0	96
64	The affinity of signal recognition particle for presecretory proteins is dependent on nascent chain length.. <i>EMBO Journal</i> , 1988, 7, 1769-1775.	3.5	94
65	Paradoxical resistance of multiple myeloma to proteasome inhibitors by decreased levels of 19S proteasomal subunits. <i>ELife</i> , 2015, 4, e08153.	2.8	84
66	Small molecule cognitive enhancer reverses age-related memory decline in mice. <i>ELife</i> , 2020, 9, .	2.8	84
67	Functional changes in the structure of the SRP GTPase on binding GDP and Mg <sup>2+</sup> +GDP. <i>Nature Structural Biology</i> , 1999, 6, 793-801.	9.7	83
68	Disruption of IRE1 $\beta$ through its kinase domain attenuates multiple myeloma. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 16420-16429.	3.3	78
69	Integrity of the yeast mitochondrial genome, but not its distribution and inheritance, relies on mitochondrial fission and fusion. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, E947-56.	3.3	75
70	SEC65 gene product is a subunit of the yeast signal recognition particle required for its integrity. <i>Nature</i> , 1992, 356, 532-533.	13.7	74
71	Multiple selection filters ensure accurate tail-anchored membrane protein targeting. <i>ELife</i> , 2016, 5, .	2.8	71
72	The unfolded protein response and endoplasmic reticulum protein targeting machineries converge on the stress sensor IRE1. <i>ELife</i> , 2018, 7, .	2.8	71

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73	Misfolded proteins bind and activate death receptor 5 to trigger apoptosis during unresolved endoplasmic reticulum stress. <i>ELife</i> , 2020, 9, .	2.8	70
74	Heat Shock Transcription Factor $\sigma^{32}$ Co-opts the Signal Recognition Particle to Regulate Protein Homeostasis in <i>E. coli</i> . <i>PLoS Biology</i> , 2013, 11, e1001735.	2.6	65
75	Regulated Ire1-dependent mRNA decay requires no-go mRNA degradation to maintain endoplasmic reticulum homeostasis in <i>S. pombe</i> . <i>ELife</i> , 2017, 6, .	2.8	64
76	Science as a Way of Knowing: From Protein Machines to Evidence-Based Decisions. <i>Cell</i> , 2016, 167, 16-19.	13.5	63
77	Genotoxic stress triggers the activation of IRE1 $\pm$ -dependent RNA decay to modulate the DNA damage response. <i>Nature Communications</i> , 2020, 11, 2401.	5.8	62
78	Genome-scale approaches for discovering novel nonconventional splicing substrates of the Ire1 nuclease. <i>Genome Biology</i> , 2004, 6, R3.	13.9	61
79	Structural and functional basis for RNA cleavage by Ire1. <i>BMC Biology</i> , 2011, 9, 47.	1.7	61
80	The affinity of signal recognition particle for presecretory proteins is dependent on nascent chain length. <i>EMBO Journal</i> , 1988, 7, 1769-75.	3.5	58
81	Dynamics of co-translational protein targeting. <i>Current Opinion in Chemical Biology</i> , 2015, 29, 79-86.	2.8	56
82	Binding Sites of the 9- and 14-Kilodalton Heterodimeric Protein Subunit of the Signal Recognition Particle (SRP) Are Contained Exclusively in the <i>Alu</i> Domain of SRP RNA and Contain a Sequence Motif That Is Conserved in Evolution. <i>Molecular and Cellular Biology</i> , 1991, 11, 3949-3959.	1.1	53
83	Endoplasmic reticulum stress-independent activation of unfolded protein response kinases by a small molecule ATP-mimic. <i>ELife</i> , 2015, 4, .	2.8	49
84	Structure of the phylogenetically most conserved domain of SRP RNA. <i>Rna</i> , 1999, 5, 1419-1429.	1.6	47
85	eIF2B conformation and assembly state regulate the integrated stress response. <i>ELife</i> , 2021, 10, .	2.8	46
86	Ceapins block the unfolded protein response sensor ATF6 $\pm$ by inducing a neomorphic inter-organelle tether. <i>ELife</i> , 2019, 8, .	2.8	46
87	Delayed Ras/PKA signaling augments the unfolded protein response. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 14800-14805.	3.3	45
88	IRE1 $\pm$ Disruption in Triple-Negative Breast Cancer Cooperates with Antiangiogenic Therapy by Reversing ER Stress Adaptation and Remodeling the Tumor Microenvironment. <i>Cancer Research</i> , 2020, 80, 2368-2379.	0.4	44
89	Specificity in endoplasmic reticulum-stress signaling in yeast entails a step-wise engagement of HAC1 mRNA to clusters of the stress sensor Ire1. <i>ELife</i> , 2014, 3, e05031.	2.8	44
90	Translational control by eIF2 $\pm$ phosphorylation regulates vulnerability to the synaptic and behavioral effects of cocaine. <i>ELife</i> , 2016, 5, .	2.8	44

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91	Quantitative microscopy reveals dynamics and fate of clustered IRE1 <sup>±</sup> . Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 1533-1542.	3.3	43
92	Ribosome-associated vesicles: A dynamic subcompartment of the endoplasmic reticulum in secretory cells. Science Advances, 2020, 6, eaay9572.	4.7	42
93	The Mars1 kinase confers photoprotection through signaling in the chloroplast unfolded protein response. ELife, 2019, 8, .	2.8	42
94	Systematic characterization of gene function in the photosynthetic alga Chlamydomonas reinhardtii. Nature Genetics, 2022, 54, 705-714.	9.4	42
95	Real-time observation of signal recognition particle binding to actively translating ribosomes. ELife, 2014, 3, .	2.8	41
96	A conformational <i>scn</i> RNA zipper promotes intron ejection during nonconventional <i>scn</i> XBP1 <i>scn</i> mRNA splicing. EMBO Reports, 2015, 16, 1688-1698.	2.0	40
97	Signal Recognition Particle-ribosome Binding Is Sensitive to Nascent Chain Length. Journal of Biological Chemistry, 2014, 289, 19294-19305.	1.6	39
98	Inhibition of the integrated stress response by viral proteins that block p-eIF2 <sup>±</sup> eIF2B association. Nature Microbiology, 2020, 5, 1361-1373.	5.9	39
99	Structure of the AAA protein Msp1 reveals mechanism of mislocalized membrane protein extraction. ELife, 2020, 9, .	2.8	38
100	Iron affects Ire1 clustering propensity and the amplitude of endoplasmic reticulum stress signaling. Journal of Cell Science, 2017, 130, 3222-3233.	1.2	35
101	Combined chemical-genetic approach identifies cytosolic HSP70 dependence in rhabdomyosarcoma. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 9015-9020.	3.3	33
102	Structural insights into ISRIB, a memory-enhancing inhibitor of the integrated stress response. FEBS Journal, 2020, 287, 239-245.	2.2	33
103	Confirming a critical role for death receptor 5 and caspase-8 in apoptosis induction by endoplasmic reticulum stress. Cell Death and Differentiation, 2018, 25, 1530-1531.	5.0	30
104	Coexpressed subunits of dual genetic origin define a conserved supercomplex mediating essential protein import into chloroplasts. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 32739-32749.	3.3	30
105	Integrated Stress Response Inhibitor Reverses Sex-Dependent Behavioral and Cell-Specific Deficits after Mild Repetitive Head Trauma. Journal of Neurotrauma, 2020, 37, 1370-1380.	1.7	29
106	STRUCTURAL BIOLOGY:SRP--Where the RNA and Membrane Worlds Meet. Science, 2000, 287, 1212-1213.	6.0	26
107	eIF2 <sup>±</sup> -mediated translational control regulates the persistence of cocaine-induced LTP in midbrain dopamine neurons. ELife, 2016, 5, .	2.8	26
108	The stress-sensing domain of activated IRE1 <sup>±</sup> forms helical filaments in narrow ER membrane tubes. Science, 2021, 374, 52-57.	6.0	24

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109	tRNA ligase structure reveals kinetic competition between non-conventional mRNA splicing and mRNA decay. <i>ELife</i> , 2019, 8, .	2.8	24
110	Decoding non-canonical mRNA decay by the endoplasmic-reticulum stress sensor IRE1 $\hat{\pm}$ . <i>Nature Communications</i> , 2021, 12, 7310.	5.8	24
111	Cristae-dependent quality control of the mitochondrial genome. <i>Science Advances</i> , 2021, 7, eabi8886.	4.7	23
112	Mrx6 regulates mitochondrial DNA copy number in <i>Saccharomyces cerevisiae</i> by engaging the evolutionarily conserved Lon protease Pim1. <i>Molecular Biology of the Cell</i> , 2020, 31, 527-545.	0.9	22
113	Msp1/ATAD1 in Protein Quality Control and Regulation of Synaptic Activities. <i>Annual Review of Cell and Developmental Biology</i> , 2020, 36, 141-164.	4.0	22
114	Translational control of nicotine-evoked synaptic potentiation in mice and neuronal responses in human smokers by eIF2 $\hat{\pm}$ . <i>ELife</i> , 2016, 5, .	2.8	19
115	Engineering ER-stress dependent non-conventional mRNA splicing. <i>ELife</i> , 2018, 7, .	2.8	17
116	Travelling by TRAM. <i>Nature</i> , 1992, 357, 22-23.	13.7	15
117	<i>Neisseria gonorrhoeae</i> PilA Is an FtsY Homolog. <i>Journal of Bacteriology</i> , 1999, 181, 731-739.	1.0	14
118	Viral evasion of the integrated stress response through antagonism of eIF2-P binding to eIF2B. <i>Nature Communications</i> , 2021, 12, 7103.	5.8	14
119	Endoplasmic reticulum stress activates human IRE1 $\hat{\pm}$ through reversible assembly of inactive dimers into small oligomers. <i>ELife</i> , 0, 11, .	2.8	14
120	Walking Along the Serendipitous Path of Discovery. <i>Molecular Biology of the Cell</i> , 2010, 21, 15-17.	0.9	13
121	Structure-Activity Studies of Bis-O-Arylglycolamides: Inhibitors of the Integrated Stress Response. <i>ChemMedChem</i> , 2016, 11, 870-880.	1.6	13
122	PROTEIN SYNTHESIS: A Ribosome at the End of the Tunnel. <i>Science</i> , 1997, 278, 2072-2073.	6.0	10
123	Intercepting IRE1 kinase-FMRP signaling prevents atherosclerosis progression. <i>EMBO Molecular Medicine</i> , 2022, 14, e15344.	3.3	10
124	Helenius et al. reply. <i>Nature</i> , 2008, 454, E4-E5.	13.7	7
125	Protomer alignment modulates specificity of RNA substrate recognition by Ire1. <i>ELife</i> , 2021, 10, .	2.8	7
126	Conserved structural elements specialize ATAD1 as a membrane protein extraction machine. <i>ELife</i> , 2022, 11, .	2.8	6



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127	A GTPase Cycle in Initiation of Protein Translocation Across the Endoplasmic Reticulum Membrane. Novartis Foundation Symposium, 1993, 176, 147-163.	1.2	5
128	A point mutation in the nucleotide exchange factor eIF2B constitutively activates the integrated stress response by allosteric modulation. ELife, 2022, 11, .	2.8	5
129	Signal sequence recognition and protein targeting to the endoplasmic reticulum membrane. Harvey Lectures, 1995, 91, 115-31.	0.2	2
130	In vitro RNA Cleavage Assays to Characterize IRE1-dependent RNA Decay. Bio-protocol, 2019, 9, e3307.	0.2	1
131	In Vitro Antimyeloma Effects of Inhibitors of the Heat Shock Protein 70 (Hsp70) Molecular Chaperone.. Blood, 2007, 110, 1524-1524.	0.6	0
132	The unfolded protein response in health and disease. FASEB Journal, 2012, 26, 229.3.	0.2	0
133	Regulating ER Protein Folding Homeostasis By Distinctively Processing mRNAs. FASEB Journal, 2018, 32, 653.9.	0.2	0