Tom A Rapoport

List of Publications by Year
in descending order

141 papers	26,118 citations	5569 82 h-index	14197 128 g-index
150 all docs	150 docs citations	150 times ranked	15300 citing authors

#	Article	IF	Citations
1	A Linear Steady-State Treatment of Enzymatic Chains. General Properties, Control and Effector Strength. FEBS Journal, 1974, 42, 89-95.	0.2	1,160
2	X-ray structure of a protein-conducting channel. Nature, 2004, 427, 36-44.	13.7	1,134
3	Sec6l-mediated transfer of a membrane protein from the endoplasmic reticulum to the proteasome for destruction. Nature, 1996, 384, 432-438.	13.7	1,054
4	The AAA ATPase Cdc48/p97 and its partners transport proteins from the ER into the cytosol. Nature, 2001, 414, 652-656.	13.7	1,025
5	A Class of Membrane Proteins Shaping the Tubular Endoplasmic Reticulum. Cell, 2006, 124, 573-586.	13.5	1,005
6	A membrane protein complex mediates retro-translocation from the ER lumen into the cytosol. Nature, 2004, 429, 841-847.	13.7	858
7	Protein translocation across the eukaryotic endoplasmic reticulum and bacterial plasma membranes. Nature, 2007, 450, 663-669.	13.7	846
8	Distinct Ubiquitin-Ligase Complexes Define Convergent Pathways for the Degradation of ER Proteins. Cell, 2006, 126, 361-373.	13.5	648
9	Cargo of Kinesin Identified as Jip Scaffolding Proteins and Associated Signaling Molecules. Journal of Cell Biology, 2001, 152, 959-970.	2.3	556
10	Protein Transport Across the Eukaryotic Endoplasmic Reticulum and Bacterial Inner Membranes. Annual Review of Biochemistry, 1996, 65, 271-303.	5.0	544
11	Function of the p97â€“Ufd1â€“Npl4 complex in retrotranslocation from the ER to the cytosol. Journal of Cell Biology, 2003, 162, 71-84.	2.3	542
12	A Class of Dynamin-like GTPases Involved in the Generation of the Tubular ER Network. Cell, 2009, 138, 549-561.	13.5	495
13	Mechanisms Determining the Morphology of the Peripheral ER. Cell, 2010, 143, 774-788.	13.5	460
14	Structure of a complex of the ATPase SecA and the protein-translocation channel. Nature, 2008, 455, 936-943.	13.7	416
15	Membrane Proteins of the Endoplasmic Reticulum Induce High-Curvature Tubules. Science, 2008, 319, 1247-1250.	6.0	386
16	Rough Sheets and Smooth Tubules. Cell, 2006, 126, 435-439.	13.5	383
17	BiP Acts as a Molecular Ratchet during Posttranslational Transport of Prepro-Î± Factor across the ER Membrane. Cell, 1999, 97, 553-564.	13.5	377
18	Posttranslational protein transport in yeast reconstituted with a purified complex of Sec proteins and Kar2p. Cell, 1995, 81, 561-570.	13.5	372

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19	Mechanisms Shaping the Membranes of Cellular Organelles. Annual Review of Cell and Developmental Biology, 2009, 25, 329-354.	4.0	368
20	PROTEIN TRANSLOCATION BY THE SEC61/SECY CHANNEL. Annual Review of Cell and Developmental Biology, 2005, 21, 529-550.	4.0	339
21	Oligomeric Rings of the Sec61p Complex Induced by Ligands Required for Protein Translocation. Cell, 1996, 87, 721-732.	13.5	326
22	Mechanisms of Sec61/SecY-Mediated Protein Translocation Across Membranes. Annual Review of Biophysics, 2012, 41, 21-40.	4.5	324
23	A protein of the endoplasmic reticulum involved early in polypeptide translocation. Nature, 1992, 357, 47-52.	13.7	310
24	Signal Sequence Recognition in Posttranslational Protein Transport across the Yeast ER Membrane. Cell, 1998, 94, 795-807.	13.5	307
25	Protein Translocation: Tunnel Vision. Cell, 1998, 92, 381-390.	13.5	297
26	Recruitment of the p97 ATPase and ubiquitin ligases to the site of retrotranslocation at the endoplasmic reticulum membrane. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 14132-14138.	3.3	295
27	The Reticulon and Dp1/Yop1p Proteins Form Immobile Oligomers in the Tubular Endoplasmic Reticulum. Journal of Biological Chemistry, 2008, 283, 18892-18904.	1.6	292
28	A novel pathway for secretory proteins?. Trends in Biochemical Sciences, 1990, 15, 86-88.	3.7	285
29	Mechanistic insights into ER-associated protein degradation. Current Opinion in Cell Biology, 2018, 53, 22-28.	2.6	264
30	Mutants Affecting the Structure of the Cortical Endoplasmic Reticulum in Saccharomyces cerevisiae. Journal of Cell Biology, 2000, 150, 461-474.	2.3	263
31	Retrotranslocation of a Misfolded Luminal ER Protein by the Ubiquitin-Ligase Hrd1p. Cell, 2010, 143, 579-591.	13.5	262
32	Structural and Mechanistic Insights into Protein Translocation. Annual Review of Cell and Developmental Biology, 2017, 33, 369-390.	4.0	258
33	A posttargeting signal sequence recognition event in the endoplasmic reticulum membrane. Cell, 1995, 82, 261-270.	13.5	257
34	Molecular Mechanism of Substrate Processing by the Cdc48 ATPase Complex. Cell, 2017, 169, 722-735.e9.	13.5	254
35	The Sec61p Complex Mediates the Integration of a Membrane Protein by Allowing Lipid Partitioning of the Transmembrane Domain. Cell, 2000, 102, 233-244.	13.5	244
36	Structural Analysis and Optimization of the Covalent Association between SpyCatcher and a Peptide Tag. Journal of Molecular Biology, 2014, 426, 309-317.	2.0	241

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37	Three-dimensional structure of the bacterial protein-translocation complex SecYEG. Nature, 2002, 418, 662-665.	13.7	237
38	Substrate processing by the Cdc48 ATPase complex is initiated by ubiquitin unfolding. Science, 2019, 365, .	6.0	233
39	J Proteins Catalytically Activate Hsp70 Molecules to Trap a Wide Range of Peptide Sequences. Molecular Cell, 1998, 2, 593-603.	4.5	231
40	Structures of the atlastin GTPase provide insight into homotypic fusion of endoplasmic reticulum membranes. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 3976-3981.	3.3	212
41	The Structure of Ribosome-Channel Complexes Engaged in Protein Translocation. Molecular Cell, 2000, 6, 1219-1232.	4.5	209
42	Stacked Endoplasmic Reticulum Sheets Are Connected by Helicoidal Membrane Motifs. Cell, 2013, 154, 285-296.	13.5	202
43	Molecular Mechanism of Membrane Protein Integration into the Endoplasmic Reticulum. Cell, 1997, 89, 523-533.	13.5	185
44	In Vitro Formation of the Endoplasmic Reticulum Occurs Independently of Microtubules by a Controlled Fusion Reaction. Journal of Cell Biology, 2000, 148, 883-898.	2.3	182
45	Key Steps in ERAD of Luminal ER Proteins Reconstituted with Purified Components. Cell, 2014, 158, 1375-1388.	13.5	175
46	A Visual Screen of a Gfp-Fusion Library Identifies a New Type of Nuclear Envelope Membrane Protein. Journal of Cell Biology, 1999, 146, 29-44.	2.3	172
47	Autoubiquitination of the Hrd1 Ligase Triggers Protein Retrotranslocation in ERAD. Cell, 2016, 166, 394-407.	13.5	169
48	Membrane-protein integration and the role of the translocation channel. Trends in Cell Biology, 2004, 14, 568-575.	3.6	160
49	Cryo-EM structure of the protein-conducting ERAD channel Hrd1 in complex with Hrd3. Nature, 2017, 548, 352-355.	13.7	160
50	Crystal structure of a substrate-engaged SecY protein-translocation channel. Nature, 2016, 531, 395-399.	13.7	159
51	Gem1 and <scp>ERMES</scp> Do Not Directly Affect Phosphatidylserine Transport from <scp>ER</scp> to Mitochondria or Mitochondrial Inheritance. Traffic, 2012, 13, 880-890.	1.3	154
52	The bacterial SecY/E translocation complex forms channel-like structures similar to those of the eukaryotic sec61p complex 1 1Edited by W. Baumeister. Journal of Molecular Biology, 1999, 285, 1789-1800.	2.0	148
53	Dissociation of the dimeric SecA ATPase during protein translocation across the bacterial membrane. EMBO Journal, 2002, 21, 4470-4479.	3.5	146
54	Cooperation of the ER-shaping proteins atlastin, lunapark, and reticulons to generate a tubular membrane network. ELife, 2016, 5, .	2.8	146

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55	Structural basis of ER-associated protein degradation mediated by the Hrd1 ubiquitin ligase complex. Science, 2020, 368, .	6.0	143
56	Disulfide bridge formation between SecY and a translocating polypeptide localizes the translocation pore to the center of SecY. Journal of Cell Biology, 2005, 169, 219-225.	2.3	142
57	A large conformational change of the translocation ATPase SecA. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 10937-10942.	3.3	141
58	The Pathway of Us11-Dependent Degradation of Mhc Class I Heavy Chains Involves a Ubiquitin-Conjugated Intermediate. Journal of Cell Biology, 1999, 147, 45-58.	2.3	139
59	Protein Translocation Is Mediated by Oligomers of the SecY Complex with One SecY Copy Forming the Channel. Cell, 2007, 129, 97-110.	13.5	138
60	Weaving the Web of ER Tubules. Cell, 2011, 147, 1226-1231.	13.5	138
61	Structure of the SecY channel during initiation of protein translocation. Nature, 2014, 506, 102-106.	13.7	138
62	Role of ubiquitination in retroâ€translocation of cholera toxin and escape of cytosolic degradation. EMBO Reports, 2002, 3, 1222-1227.	2.0	135
63	RecA-like motor ATPasesâ€"lessons from structures. Biochimica Et Biophysica Acta - Bioenergetics, 2004, 1659, 1-18.	0.5	127
64	Architecture of the Ribosomeâ€"Channel Complex Derived from Native Membranes. Journal of Molecular Biology, 2005, 348, 445-457.	2.0	126
65	A role for the two-helix finger of the SecA ATPase in protein translocation. Nature, 2008, 455, 984-987.	13.7	124
66	A model for the generation and interconversion of ER morphologies. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E5243-51.	3.3	112
67	Toward an understanding of the Cdc48/p97 ATPase. F1000Research, 2017, 6, 1318.	0.8	110
68	Structure of the post-translational protein translocation machinery of the ER membrane. Nature, 2019, 566, 136-139.	13.7	108
69	The Plug Domain of the SecY Protein Stabilizes the Closed State of the Translocation Channel and Maintains a Membrane Seal. Molecular Cell, 2007, 26, 511-521.	4.5	106
70	The dynamin-like GTPase Sey1p mediates homotypic ER fusion in <i>S. cerevisiae</i>. Journal of Cell Biology, 2012, 197, 209-217.	2.3	104
71	The Endoplasmic Reticulum Membrane Is Permeable to Small Molecules. Molecular Biology of the Cell, 2004, 15, 447-455.	0.9	103
72	The Signal Sequence Coding Region Promotes Nuclear Export of mRNA. PLoS Biology, 2007, 5, e322.	2.6	103

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73	A â€œPush and Slideâ€•Mechanism Allows Sequence-Insensitive Translocation of Secretory Proteins by the SecA ATPase. Cell, 2014, 157, 1416-1429.	13.5	103
74	Determining the Conductance of the SecY Protein Translocation Channel for Small Molecules. Molecular Cell, 2007, 26, 501-509.	4.5	102
75	Lipid interaction of the C terminus and association of the transmembrane segments facilitate atlastin-mediated homotypic endoplasmic reticulum fusion. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, E2146-54.	3.3	102
76	An ER Protein Functionally Couples Neutral Lipid Metabolism on Lipid Droplets to Membrane Lipid Synthesis in the ER. Cell Reports, 2014, 6, 44-55.	2.9	99
77	Structure of the Mammalian Ribosomeâ€“Channel Complex at 17Ã… Resolution. Journal of Molecular Biology, 2002, 324, 871-886.	2.0	96
78	Reconstitution of the tubular endoplasmic reticulum network with purified components. Nature, 2017, 543, 257-260.	13.7	95
79	The Bacterial ATPase SecA Functions as a Monomer in Protein Translocation. Journal of Biological Chemistry, 2005, 280, 9097-9105.	1.6	94
80	Single Copies of Sec61 and TRAP Associate with a Nontranslating Mammalian Ribosome. Structure, 2008, 16, 1126-1137.	1.6	94
81	Ribosome Binding of a Single Copy of the SecY Complex: Implications for Protein Translocation. Molecular Cell, 2007, 28, 1083-1092.	4.5	92
82	Cooperation of transmembrane segments during the integration of a double-spanning protein into the ER membrane. EMBO Journal, 2003, 22, 3654-3663.	3.5	89
83	Polyubiquitin Serves as a Recognition Signal, Rather than a Ratcheting Molecule, during Retrotranslocation of Proteins across the Endoplasmic Reticulum Membrane. Journal of Biological Chemistry, 2003, 278, 34774-34782.	1.6	87
84	Preserving the membrane barrier for small molecules during bacterial protein translocation. Nature, 2011, 473, 239-242.	13.7	86
85	Multiple mechanisms determine ER network morphology during the cell cycle in <i>Xenopus</i> egg extracts. Journal of Cell Biology, 2013, 203, 801-814.	2.3	85
86	Structure of the Cdc48 ATPase with its ubiquitin-binding cofactor Ufd1â€“Npl4. Nature Structural and Molecular Biology, 2018, 25, 616-622.	3.6	82
87	Spontaneous Release of Cytosolic Proteins from Posttranslational Substrates before Their Transport into the Endoplasmic Reticulum. Journal of Cell Biology, 2000, 151, 167-178.	2.3	81
88	Protein Transport by Purified Yeast Sec Complex and Kar2p Without Membranes. Science, 1997, 277, 938-941.	6.0	78
89	A Novel Dimer Interface and Conformational Changes Revealed by an X-ray Structure of B. subtilis SecA. Journal of Molecular Biology, 2006, 364, 259-265.	2.0	78
90	Unique double-ring structure of the peroxisomal Pex1/Pex6 ATPase complex revealed by cryo-electron microscopy. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E4017-25.	3.3	72

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91	Fusion of the endoplasmic reticulum by membrane-bound GTPases. Seminars in Cell and Developmental Biology, 2016, 60, 105-111.	2.3	68
92	Signal Sequence Recognition in Cotranslational Translocation by Protein Components of the Endoplasmic Reticulum Membrane. Journal of Cell Biology, 1998, 142, 355-364.	2.3	66
93	Cis and trans interactions between atlastin molecules during membrane fusion. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E1851-60.	3.3	65
94	Ddi1 is a ubiquitin-dependent protease. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 7776-7781.	3.3	63
95	Conformational Flexibility and Peptide Interaction of the Translocation ATPase SecA. Journal of Molecular Biology, 2009, 394, 606-612.	2.0	61
96	Mapping polypeptide interactions of the SecA ATPase during translocation. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 20800-20805.	3.3	59
97	Binding of Signal Recognition Particle Gives Ribosome/Nascent Chain Complexes a Competitive Advantage in Endoplasmic Reticulum Membrane Interaction. Molecular Biology of the Cell, 1998, 9, 103-115.	0.9	58
98	Structure of the substrate-engaged SecA-SecY protein translocation machine. Nature Communications, 2019, 10, 2872.	5.8	55
99	Mechanism of membrane-curvature generation by ER-tubule shaping proteins. Nature Communications, 2021, 12, 568.	5.8	55
100	Decatransin, a novel natural product inhibiting protein translocation at the Sec61/SecY translocon. Journal of Cell Science, 2015, 128, 1217-29.	1.2	52
101	Reconstituting the reticular ER network â€“ mechanistic implications and open questions. Journal of Cell Science, 2019, 132, .	1.2	52
102	Structural insight into the protein translocation channel. Current Opinion in Structural Biology, 2004, 14, 390-396.	2.6	51
103	Ratcheting in post-translational protein translocation: a mathematical model11Edited by G. von Heijne. Journal of Molecular Biology, 2001, 305, 643-656.	2.0	50
104	Interactions between Sec Complex and Prepro-Î±-Factor during Posttranslational Protein Transport into the Endoplasmic Reticulum. Molecular Biology of the Cell, 2004, 15, 1-10.	0.9	50
105	tRNA-mediated labelling of proteins with biotin. A nonradioactive method for the detection of cell-free translation products. FEBS Journal, 1988, 172, 663-668.	0.2	49
106	Protein translocation by the SecA ATPase occurs by a powerâ€stroke mechanism. EMBO Journal, 2019, 38, .	3.5	47
107	Translocation of Proteins through a Distorted Lipid Bilayer. Trends in Cell Biology, 2021, 31, 473-484.	3.6	47
108	Cryo-EM structure determination of small proteins by nanobody-binding scaffolds (Legobodies). Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	44

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109	Two alternative binding mechanisms connect the protein translocation Sec71-Sec72 complex with heat shock proteins. Journal of Biological Chemistry, 2017, 292, 8007-8018.	1.6	43
110	Cycles of autoubiquitination and deubiquitination regulate the ERAD ubiquitin ligase Hrd1. ELife, 2019, 8, .	2.8	40
111	Translocation of polyubiquitinated protein substrates by the hexameric Cdc48 ATPase. Molecular Cell, 2022, 82, 570-584.e8.	4.5	39
112	The ERâ€associated degradation component Der1p and its homolog Dfm1p are contained in complexes with distinct cofactors of the ATPase Cdc48p. FEBS Letters, 2008, 582, 1575-1580.	1.3	38
113	Analysis of Polypeptide Movement in the SecY Channel during SecA-mediated Protein Translocation. Journal of Biological Chemistry, 2008, 283, 15709-15715.	1.6	37
114	Ribosome Binding to and Dissociation from Translocation Sites of the Endoplasmic Reticulum Membrane. Molecular Biology of the Cell, 2006, 17, 3860-3869.	0.9	36
115	Mechanism of a cytosolic <i>O</i> -glycosyltransferase essential for the synthesis of a bacterial adhesion protein. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E1190-9.	3.3	36
116	A peroxisomal ubiquitin ligase complex forms a retrotranslocation channel. Nature, 2022, 607, 374-380.	13.7	36
117	Protein transport across the endoplasmic reticulum membrane. FEBS Journal, 2008, 275, 4471-4478.	2.2	30
118	Conformational Changes of the Clamp of the Protein Translocation ATPase SecA. Journal of Molecular Biology, 2015, 427, 2348-2359.	2.0	26
119	Cross-linked SecA dimers are not functional in protein translocation. FEBS Letters, 2007, 581, 2616-2620.	1.3	25
120	Recognition of an ERAD-L substrate analyzed by site-specific in vivo photocrosslinking. FEBS Letters, 2011, 585, 1281-1286.	1.3	25
121	Structures of the doubleâ€ring AAA ATPase Pex1â€"Pex6 involved in peroxisome biogenesis. FEBS Journal, 2016, 283, 986-992.	2.2	19
122	Mechanism of Lamellar Body Formation by Lung Surfactant Protein B. Molecular Cell, 2021, 81, 49-66.e8.	4.5	19
123	Unraveling the sequence of cytosolic reactions in the export of GspB adhesin from Streptococcus gordonii. Journal of Biological Chemistry, 2018, 293, 5360-5373.	1.6	15
124	Peroxisome protein import recapitulated in <i>Xenopus</i> egg extracts. Journal of Cell Biology, 2019, 218, 2021-2034.	2.3	14
125	The ER morphology-regulating lunapark protein induces the formation of stacked bilayer discs. Life Science Alliance, 2018, 1, e201700014.	1.3	13
126	Protease protection assays show polypeptide movement into the SecY channel by power strokes of the SecA ATPase. EMBO Reports, 2020, 21, e50905.	2.0	12

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127	Involvement of <scp>VAT</scp>â€1 in Phosphatidylserine Transfer from the Endoplasmic Reticulum to Mitochondria. Traffic, 2015, 16, 1306-1317.	1.3	11
128	Cilia and Hedgehog Signaling in the Mouse Embryo. , 2010, 102, 103-115.		9
129	Tracking the Road from Inflammation to Cancer: the Critical Role of IÎºB Kinase (IKK). , 2010, 102, 133-151.		8
130	Endoplasmic Reticulum Network Formation with<i>Xenopus</i>Egg Extracts. Cold Spring Harbor Protocols, 2019, 2019, pdb.prot097204.	0.2	5
131	Signaling Networks that Control Synapse Development and Cognitive Function. , 2010, 102, 73-102.		1
132	Basal Bodies: Their Roles in Generating Asymmetry. , 2010, 102, 17-50.		1
133	Ran is associated with chromosomes during starfish oocyte meiosis and embryonic mitoses. Zygote, 1999, 8, S91-S91.	0.5	0
134	A Preliminary Report on My Life in Science. Molecular Biology of the Cell, 2010, 21, 3770-3772.	0.9	0
135	Protein Transport in and out of the Endoplasmic Reticulum. , 2010, 102, 51-72.		0
136	Active Members. , 0, , 179-189.		0
137	Former Officers of the Harvey Society. , 0, , 153-168.		0
138	Investigating the import of folded proteins into peroxisomes. FASEB Journal, 2013, 27, lb127.	0.2	0
139	The role of the Câ€terminus and transmembrane segments in facilitating atlastinâ€mediated endoplasmic reticulum fusion. FASEB Journal, 2013, 27, 1016.1.	0.2	0
140	Investigation of SecY proteinâ€translocation channel in action using a novel in vivo tool (LB198). FASEB Journal, 2014, 28, LB198.	0.2	0
141	Investigation of SecY proteinâ€translocation channel in action using a novel in vivo tool (362.3). FASEB Journal, 2014, 28, 362.3.	0.2	0