

# Robert S Molday

## List of Publications by Year in descending order

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102  
papers

7,931  
citations

53794

45  
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53230

85  
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103  
all docs

103  
docs citations

103  
times ranked

5217  
citing authors

#	ARTICLE	IF	CITATIONS
1	Modulation of the cGMP-gated channel of rod photoreceptor cells by calmodulin. <i>Nature</i> , 1993, 361, 76-79.	27.8	455
2	Retinal Stimulates ATP Hydrolysis by Purified and Reconstituted ABCR, the Photoreceptor-specific ATP-binding Cassette Transporter Responsible for Stargardt Disease. <i>Journal of Biological Chemistry</i> , 1999, 274, 8269-8281.	3.4	322
3	Cloning of the CDNA for a novel photoreceptor membrane protein (rom-1) identifies a disk rim protein family implicated in human retinopathies. <i>Neuron</i> , 1992, 8, 1171-1184.	8.1	310
4	The 220-kDa Rim Protein of Retinal Rod Outer Segments Is a Member of the ABC Transporter Superfamily. <i>Journal of Biological Chemistry</i> , 1997, 272, 10303-10310.	3.4	276
5	X-linked juvenile retinoschisis: Clinical diagnosis, genetic analysis, and molecular mechanisms. <i>Progress in Retinal and Eye Research</i> , 2012, 31, 195-212.	15.5	259
6	P4-ATPases as Phospholipid Flippases—Structure, Function, and Enigmas. <i>Frontiers in Physiology</i> , 2016, 7, 275.	2.8	252
7	ABCR expression in foveal cone photoreceptors and its role in Stargardt macular dystrophy. <i>Nature Genetics</i> , 2000, 25, 257-258.	21.4	226
8	ABCA4 is an N-retinylidene-phosphatidylethanolamine and phosphatidylethanolamine importer. <i>Nature Communications</i> , 2012, 3, 925.	12.8	215
9	Differential immunogold-dextran labeling of bovine and frog rod and cone cells using monoclonal antibodies against bovine rhodopsin. <i>Experimental Eye Research</i> , 1986, 42, 55-71.	2.6	206
10	Inactivation of the murine X-linked juvenile retinoschisis gene, <i>Rs1h</i> , suggests a role of retinoschisin in retinal cell layer organization and synaptic structure. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2002, 99, 6222-6227.	7.1	206
11	Localization of binding sites for carboxyl terminal specific anti-rhodopsin monoclonal antibodies using synthetic peptides. <i>Biochemistry</i> , 1984, 23, 6544-6549.	2.5	194
12	Differential Phospholipid Substrates and Directional Transport by ATP-binding Cassette Proteins ABCA1, ABCA7, and ABCA4 and Disease-causing Mutants. <i>Journal of Biological Chemistry</i> , 2013, 288, 34414-34426.	3.4	181
13	The cGMP-gated Channel and Related Glutamic Acid-rich Proteins Interact with Peripherin-2 at the Rim Region of Rod Photoreceptor Disc Membranes. <i>Journal of Biological Chemistry</i> , 2001, 276, 48009-48016.	3.4	177
14	Prolonged Recovery of Retinal Structure/Function after Gene Therapy in an <i>Rs1h</i> -Deficient Mouse Model of X-Linked Juvenile Retinoschisis. <i>Molecular Therapy</i> , 2005, 12, 644-651.	8.2	166
15	Localization, Purification, and Functional Reconstitution of the P4-ATPase <i>Atp8a2</i> , a Phosphatidylserine Flippase in Photoreceptor Disc Membranes. <i>Journal of Biological Chemistry</i> , 2009, 284, 32670-32679.	3.4	165
16	N-Retinylidene-phosphatidylethanolamine Is the Preferred Retinoid Substrate for the Photoreceptor-specific ABC Transporter ABCA4 (ABCR). <i>Journal of Biological Chemistry</i> , 2004, 279, 53972-53979.	3.4	151
17	Rom-1 is required for rod photoreceptor viability and the regulation of disk morphogenesis. <i>Nature Genetics</i> , 2000, 25, 67-73.	21.4	146
18	Membrane Topology of the ATP Binding Cassette Transporter ABCR and Its Relationship to ABC1 and Related ABCA Transporters. <i>Journal of Biological Chemistry</i> , 2001, 276, 23539-23546.	3.4	141

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19	The role of the photoreceptor ABC transporter ABCA4 in lipid transport and Stargardt macular degeneration. <i>Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids</i> , 2009, 1791, 573-583.	2.4	136
20	Photoreceptors at a glance. <i>Journal of Cell Science</i> , 2015, 128, 4039-4045.	2.0	134
21	Cysteine Residues of Photoreceptor Peripherin/rd5: A Role in Subunit Assembly and Autosomal Dominant Retinitis Pigmentosa. <i>Biochemistry</i> , 1998, 37, 680-685.	2.5	123
22	Mammalian P4-ATPases and ABC transporters and their role in phospholipid transport. <i>Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids</i> , 2013, 1831, 555-574.	2.4	120
23	The Effect of Lipid Environment and Retinoids on the ATPase Activity of ABCR, the Photoreceptor ABC Transporter Responsible for Stargardt Macular Dystrophy. <i>Journal of Biological Chemistry</i> , 2000, 275, 20399-20405.	3.4	118
24	Critical Role of the $\beta$ -Subunit CDC50A in the Stable Expression, Assembly, Subcellular Localization, and Lipid Transport Activity of the P4-ATPase ATP8A2. <i>Journal of Biological Chemistry</i> , 2011, 286, 17205-17216.	3.4	118
25	ATP-binding cassette transporter ABCA4 and chemical isomerization protect photoreceptor cells from the toxic accumulation of excess 11- <i>cis</i> -retinal. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 5024-5029.	7.1	116
26	Transport through recycling endosomes requires EHD1 recruitment by a phosphatidylserine translocase. <i>EMBO Journal</i> , 2015, 34, 669-688.	7.8	113
27	Retinoschisin (RS1), the Protein Encoded by the X-linked Retinoschisis Gene, Is Anchored to the Surface of Retinal Photoreceptor and Bipolar Cells through Its Interactions with a Na/K ATPase-SARM1 Complex. <i>Journal of Biological Chemistry</i> , 2007, 282, 32792-32801.	3.4	112
28	Proteomics of Photoreceptor Outer Segments Identifies a Subset of SNARE and Rab Proteins Implicated in Membrane Vesicle Trafficking and Fusion. <i>Molecular and Cellular Proteomics</i> , 2008, 7, 1053-1066.	3.8	110
29	Defective Discoidin Domain Structure, Subunit Assembly, and Endoplasmic Reticulum Processing of Retinoschisin are Primary Mechanisms Responsible for X-linked Retinoschisis. <i>Journal of Biological Chemistry</i> , 2003, 278, 28139-28146.	3.4	109
30	Heteromeric Interactions Required for Abundance and Subcellular Localization of Human CDC50 Proteins and Class 1 P4-ATPases. <i>Journal of Biological Chemistry</i> , 2010, 285, 40088-40096.	3.4	108
31	RS1, a Discoidin Domain-containing Retinal Cell Adhesion Protein Associated with X-linked Retinoschisis, Exists as a Novel Disulfide-linked Octamer. <i>Journal of Biological Chemistry</i> , 2005, 280, 10721-10730.	3.4	107
32	Critical roles of isoleucine-364 and adjacent residues in a hydrophobic gate control of phospholipid transport by the mammalian P4-ATPase ATP8A2. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, E1334-43.	7.1	103
33	Mapping of the rod photoreceptor ABC transporter (ABCR) to 1p21-p22.1 and identification of novel mutations in Stargardt's disease. <i>Human Genetics</i> , 1998, 102, 21-26.	3.8	94
34	ATP-binding cassette transporter ABCA4: Molecular properties and role in vision and macular degeneration. <i>Journal of Bioenergetics and Biomembranes</i> , 2007, 39, 507-517.	2.3	92
35	Advancing Therapeutic Strategies for Inherited Retinal Degeneration: Recommendations From the Monaciano Symposium. <i>Investigative Ophthalmology and Visual Science</i> , 2015, 56, 918-931.	3.3	92
36	Effect of Late-stage Therapy on Disease Progression in AAV-mediated Rescue of Photoreceptor Cells in the Retinoschisin-deficient Mouse. <i>Molecular Therapy</i> , 2008, 16, 1010-1017.	8.2	91

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37	Critical role of a transmembrane lysine in aminophospholipid transport by mammalian photoreceptor P <sub>4</sub> -ATPase ATP8A2. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 1449-1454.	7.1	88
38	Knockout of GARPs and the $\beta$ -subunit of the rod cGMP-gated channel disrupts disk morphogenesis and rod outer segment structural integrity. Journal of Cell Science, 2009, 122, 1192-1200.	2.0	84
39	Lipid transport by mammalian ABC proteins. Essays in Biochemistry, 2011, 50, 265-290.	4.7	83
40	Evidence from normal and degenerating photoreceptors that two outer segment integral membrane proteins have separate transport pathways. , 1997, 387, 148-156.		78
41	Defective lipid transport and biosynthesis in recessive and dominant Stargardt macular degeneration. Progress in Lipid Research, 2010, 49, 476-492.	11.6	73
42	Insights into the Molecular Properties of ABCA4 and Its Role in the Visual Cycle and Stargardt Disease. Progress in Molecular Biology and Translational Science, 2015, 134, 415-431.	1.7	58
43	Advancing Clinical Trials for Inherited Retinal Diseases: Recommendations from the Second Monaciano Symposium. Translational Vision Science and Technology, 2020, 9, 2.	2.2	56
44	Relation of Response to Treatment with Dorzolamide in X-Linked Retinoschisis to the Mechanism of Functional Loss in Retinoschisin. American Journal of Ophthalmology, 2009, 147, 111-115.e1.	3.3	53
45	Molecular Organization and ATP-Induced Conformational Changes of ABCA4, the Photoreceptor-Specific ABC Transporter. Structure, 2013, 21, 854-860.	3.3	52
46	Role of the C Terminus of the Photoreceptor ABCA4 Transporter in Protein Folding, Function, and Retinal Degenerative Diseases. Journal of Biological Chemistry, 2009, 284, 3640-3649.	3.4	51
47	RD3 gene delivery restores guanylate cyclase localization and rescues photoreceptors in the Rd3 mouse model of Leber congenital amaurosis 12. Human Molecular Genetics, 2013, 22, 3894-3905.	2.9	50
48	Proteomic Analysis and Functional Characterization of P4-ATPase Phospholipid Flippases from Murine Tissues. Scientific Reports, 2018, 8, 10795.	3.3	50
49	Phospholipid flippase ATP8A2 is required for normal visual and auditory function and photoreceptor and spiral ganglion cell survival. Journal of Cell Science, 2014, 127, 1138-49.	2.0	47
50	TMEM30A loss-of-function mutations drive lymphomagenesis and confer therapeutically exploitable vulnerability in B-cell lymphoma. Nature Medicine, 2020, 26, 577-588.	30.7	46
51	Correlating the Expression and Functional Activity of ABCA4 Disease Variants With the Phenotype of Patients With Stargardt Disease. , 2018, 59, 2305.		44
52	Focus on Molecules: Retinoschisin (RS1). Experimental Eye Research, 2007, 84, 227-228.	2.6	42
53	A review of cell surface markers and labelling techniques for scanning electron microscopy. The Histochemical Journal, 1980, 12, 273-315.	0.6	41
54	A new mouse model for stationary night blindness with mutant Slc24a1 explains the pathophysiology of the associated human disease. Human Molecular Genetics, 2015, 24, 5915-5929.	2.9	40

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55	Functional Interaction between the Two Halves of the Photoreceptor-specific ATP Binding Cassette Protein ABCR (ABCA4). <i>Journal of Biological Chemistry</i> , 2003, 278, 39600-39608.	3.4	39
56	Dual <i>ABCA4</i> -AAV Vector Treatment Reduces Pathogenic Retinal A2E Accumulation in a Mouse Model of Autosomal Recessive Stargardt Disease. <i>Human Gene Therapy</i> , 2019, 30, 1361-1370.	2.7	38
57	1D4: A Versatile Epitope Tag for the Purification and Characterization of Expressed Membrane and Soluble Proteins. <i>Methods in Molecular Biology</i> , 2014, 1177, 1-15.	0.9	38
58	A Combined Transgenic Proteomic Analysis and Regulated Trafficking of Neuroligin-2. <i>Journal of Biological Chemistry</i> , 2014, 289, 29350-29364.	3.4	37
59	In Vivo Imaging of the Mouse Model of X-Linked Juvenile Retinoschisis with Fourier Domain Optical Coherence Tomography. , 2009, 50, 2989.		35
60	Posttranslational Modifications of the Photoreceptor-Specific ABC Transporter ABCA4. <i>Biochemistry</i> , 2011, 50, 6855-6866.	2.5	34
61	Impaired Association of Retinal Degeneration-3 with Guanylate Cyclase-1 and Guanylate Cyclase-activating Protein-1 Leads to Leber Congenital Amaurosis-1. <i>Journal of Biological Chemistry</i> , 2015, 290, 3488-3499.	3.4	34
62	C-terminus of the P4-ATPase ATP8A2 functions in protein folding and regulation of phospholipid flippase activity. <i>Molecular Biology of the Cell</i> , 2017, 28, 452-462.	2.1	30
63	Recessive mutations in ATP8A2 cause severe hypotonia, cognitive impairment, hyperkinetic movement disorders and progressive optic atrophy. <i>Orphanet Journal of Rare Diseases</i> , 2018, 13, 86.	2.7	29
64	Structure and function of ABCA4 and its role in the visual cycle and Stargardt macular degeneration. <i>Progress in Retinal and Eye Research</i> , 2022, 89, 101036.	15.5	26
65	Insights into the role of RD3 in guanylate cyclase trafficking, photoreceptor degeneration, and Leber congenital amaurosis. <i>Frontiers in Molecular Neuroscience</i> , 2014, 7, 44.	2.9	25
66	<i>Cis</i> -acting modifiers in the <i>ABCA4</i> locus contribute to the penetrance of the major disease-causing variant in Stargardt disease. <i>Human Molecular Genetics</i> , 2021, 30, 1293-1304.	2.9	25
67	Cryo-EM structures of the ABCA4 importer reveal mechanisms underlying substrate binding and Stargardt disease. <i>Nature Communications</i> , 2021, 12, 5902.	12.8	25
68	Coexpression and Interaction of Wild-type and Missense RS1 Mutants Associated with X-Linked Retinoschisis: Its Relevance to Gene Therapy. , 2007, 48, 2491.		24
69	Localization and functional characterization of the p.Asn965Ser (N965S) ABCA4 variant in mice reveal pathogenic mechanisms underlying Stargardt macular degeneration. <i>Human Molecular Genetics</i> , 2018, 27, 295-306.	2.9	24
70	[57] Purification and characterization of ABCR from bovine rod outer segments. <i>Methods in Enzymology</i> , 2000, 315, 864-879.	1.0	22
71	Identification and functional analyses of disease-associated P4-ATPase phospholipid flippase variants in red blood cells. <i>Journal of Biological Chemistry</i> , 2019, 294, 6809-6821.	3.4	22
72	Disease mutations reveal residues critical to the interaction of P4-ATPases with lipid substrates. <i>Scientific Reports</i> , 2017, 7, 10418.	3.3	21

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73	Functional analysis and classification of homozygous and hypomorphic ABCA4 variants associated with Stargardt macular degeneration. <i>Human Mutation</i> , 2020, 41, 1944-1956.	2.5	21
74	Characterization and Purification of the Discoidin Domain-Containing Protein Retinoschisin and Its Interaction with Galactose. <i>Biochemistry</i> , 2008, 47, 9098-9106.	2.5	19
75	Phosphatidylserine flipping by the P4-ATPase ATP8A2 is electrogenic. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 16332-16337.	7.1	19
76	PAX6 MiniPromoters drive restricted expression from rAAV in the adult mouse retina. <i>Molecular Therapy - Methods and Clinical Development</i> , 2016, 3, 16051.	4.1	17
77	Cog-Wheel Octameric Structure of RS1, the Discoidin Domain Containing Retinal Protein Associated with X-Linked Retinoschisis. <i>PLoS ONE</i> , 2016, 11, e0147653.	2.5	17
78	An unusual X-linked retinoschisis phenotype and biochemical characterization of the W112C RS1 mutation. <i>Vision Research</i> , 2006, 46, 3845-3852.	1.4	16
79	Cell-Specific Markers for the Identification of Retinal Cells by Immunofluorescence Microscopy. <i>Methods in Molecular Biology</i> , 2012, 935, 185-199.	0.9	15
80	ATP8A2-related disorders as recessive cerebellar ataxia. <i>Journal of Neurology</i> , 2020, 267, 203-213.	3.6	15
81	Binding of Retinoids to ABCA4, the Photoreceptor ABC Transporter Associated with Stargardt Macular Degeneration. <i>Methods in Molecular Biology</i> , 2010, 652, 163-176.	0.9	15
82	Peripherin diverts ciliary ectosome release to photoreceptor disc morphogenesis. <i>Journal of Cell Biology</i> , 2017, 216, 1227-1229.	5.2	14
83	Expression and functional characterization of missense mutations in ATP8A2 linked to severe neurological disorders. <i>Human Mutation</i> , 2019, 40, 2353-2364.	2.5	14
84	Asparagine 905 of the mammalian phospholipid flippase ATP8A2 is essential for lipid substrate-induced activation of ATP8A2 dephosphorylation. <i>Journal of Biological Chemistry</i> , 2019, 294, 5970-5979.	3.4	14
85	TMEM67, TMEM237, and Embigin in Complex With Monocarboxylate Transporter MCT1 Are Unique Components of the Photoreceptor Outer Segment Plasma Membrane. <i>Molecular and Cellular Proteomics</i> , 2021, 20, 100088.	3.8	14
86	Functional Characterization of ABCA4 Missense Variants Linked to Stargardt Macular Degeneration. <i>International Journal of Molecular Sciences</i> , 2021, 22, 185.	4.1	14
87	Phospholipid flippase chaperone CDC50A is required for synapse maintenance by regulating phosphatidylserine exposure. <i>EMBO Journal</i> , 2021, 40, e107915.	7.8	13
88	The cGMP-gated channel of photoreceptor cells: Its structural properties and role in phototransduction. <i>Behavioral and Brain Sciences</i> , 1995, 18, 441-451.	0.7	12
89	Ca <sup>2+</sup> -activated Cl current predominates in threshold response of mouse olfactory receptor neurons. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 5570-5575.	7.1	12
90	Interaction of 4.1G and cGMP-gated channels in rod photoreceptor outer segments. <i>Journal of Cell Science</i> , 2013, 126, 5725-34.	2.0	11

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91	Specific mutations in mammalian P4â€ATPase ATP8A2 catalytic subunit entail differential glycosylation of the accessory CDC50A subunit. FEBS Letters, 2015, 589, 3908-3914.	2.8	11
92	Cyclic GMPâ€Gated Channel and Peripherin/rdsâ€româ€l Complex of Rod Cells. Novartis Foundation Symposium, 1999, 224, 249-264.	1.1	9
93	Role of Subunit Assembly in Autosomal Dominant Retinitis Pigmentosa Linked to Mutations in Peripherin 2. Novartis Foundation Symposium, 2008, , 95-116.	1.1	7
94	Growth hormone regulates opsin expression in the retina of a salmonid fish. Journal of Neuroendocrinology, 2019, 31, e12804.	2.6	7
95	Novel variants in critical domains of ATP8A2 and expansion of clinical spectrum. Human Mutation, 2021, 42, 491-497.	2.5	5
96	A biosystems approach to identify the molecular signaling mechanisms of TMEM30A during tumor migration. PLoS ONE, 2017, 12, e0179900.	2.5	4
97	Molecular Organization of Rod Outer Segments. , 2004, , 259-300.		3
98	Cell-Specific Markers for the Identification of Retinal Cells and Subcellular Organelles by Immunofluorescence Microscopy. Methods in Molecular Biology, 2019, 1834, 293-310.	0.9	3
99	Role of subunit assembly in autosomal dominant retinitis pigmentosa linked to mutations in peripherin 2. Novartis Foundation Symposium, 2004, 255, 95-112; discussion 113-6, 177-8.	1.1	2
100	Further insight into the structural and regulatory properties of the cGMP-gated channel. Behavioral and Brain Sciences, 1995, 18, 500-501.	0.7	0
101	Segregating phototransduction from morphogenesis in photoreceptor outer segments. Channels, 2015, 9, 59-60.	2.8	0
102	ABCA4 and Its Role in the Visual Cycle and Inherited Retinal Degenerative Diseases. , 2011, , 127-161.		0