Theodore G Wensel

List of Publications by Year
in descending order

135 papers	7,512 citations	57631 44 h-index	62479 80 g-index
142 all docs	142 docs citations	142 times ranked	6259 citing authors

#	Article	IF	Citations
1	Slowed recovery of rod photoresponse in mice lacking the GTPase accelerating protein RGS9-1. Nature, 2000, 403, 557-560.	13.7	452
2	RGS9, a GTPase Accelerator for Phototransduction. Neuron, 1998, 20, 95-102.	3.8	355
3	Neural Reprogramming in Retinal Degeneration. , 2007, 48, 3364.		284
4	Structural determinants for regulation of phosphodiesterase by a G protein at 2.0 Ã…. Nature, 2001, 409, 1071-1077.	13.7	256
5	RGS Expression Rate-Limits Recovery of Rod Photoresponses. Neuron, 2006, 51, 409-416.	3.8	244
6	A GTPase-accelerating factor for transducin, distinct from its effector cGMP phosphodiesterase, in rod outer segment membranes. Neuron, 1993, 11, 939-949.	3.8	207
7	Structure of TRPV1 channel revealed by electron cryomicroscopy. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 7451-7455.	3.3	194
8	Instability of GGL domain-containing RGS proteins in mice lacking the G protein Â-subunit GÂ5. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 6604-6609.	3.3	193
9	Metal chelates as probes of biological systems. Accounts of Chemical Research, 1984, 17, 202-209.	7.6	186
10	Evolutionary Trace of G Protein-coupled Receptors Reveals Clusters of Residues That Determine Global and Class-specific Functions. Journal of Biological Chemistry, 2004, 279, 8126-8132.	1.6	179
11	R9AP, a membrane anchor for the photoreceptor GTPase accelerating protein, RGS9-1. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 9755-9760.	3.3	164
12	High expression levels in cones of RGS9, the predominant GTPase accelerating protein of rods. Proceedings of the National Academy of Sciences of the United States of America, 1998, 95, 5351-5356.	3.3	159
13	Reciprocal control of retinal rod cyclic GMP phosphodiesterase by its Î³ subunit and transducin. Proteins: Structure, Function and Bioinformatics, 1986, 1, 90-99.	1.5	149
14	Three-Dimensional Architecture of the Rod Sensory Cilium and Its Disruption in Retinal Neurodegeneration. Cell, 2012, 151, 1029-1041.	13.5	142
15	A Synaptic Vesicle-Associated Ca2+ Channel Promotes Endocytosis and Couples Exocytosis to Endocytosis. Cell, 2009, 138, 947-960.	13.5	138
16	Prediction and confirmation of a site critical for effector regulation of RGS domain activity. Nature Structural Biology, 2001, 8, 234-237.	9.7	125
17	Oral Curcumin Mitigates the Clinical and Neuropathologic Phenotype of the Trembler-J Mouse: A Potential Therapy for Inherited Neuropathy. American Journal of Human Genetics, 2007, 81, 438-453.	2.6	122
18	Cosegregation and functional analysis of mutant ABCR (ABCA4) alleles in families that manifest both Stargardt disease and age-related macular degeneration. Human Molecular Genetics, 2001, 10, 2671-2678.	1.4	110

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19	Signal transducing membrane complexes of photoreceptor outer segments. Vision Research, 2008, 48, 2052-2061.	0.7	106
20	Luminescence Properties of Terbium(III) Complexes with 4-Substituted Dipicolinic Acid Analogs. Inorganic Chemistry, 1995, 34, 864-869.	1.9	105
21	Single-Atom Fluorescence Switch: A General Approach toward Visible-Light-Activated Dyes for Biological Imaging. Journal of the American Chemical Society, 2019, 141, 14699-14706.	6.6	98
22	Characterization of retinal guanylate cyclase-activating protein 3 (GCAP3) from zebrafish to man. European Journal of Neuroscience, 2002, 15, 63-78.	1.2	95
23	Evolution of the Regulators of G-Protein Signaling Multigene Family in Mouse and Human. Genomics, 2002, 79, 177-185.	1.3	91
24	GTPase Regulators and Photoresponses in Cones of the Eastern Chipmunk. Journal of Neuroscience, 2003, 23, 1287-1297.	1.7	91
25	ABCA4 mutations causing mislocalization are found frequently in patients with severe retinal dystrophies. Human Molecular Genetics, 2005, 14, 2769-2778.	1.4	91
26	Activation mechanism of retinal rod cyclic GMP phosphodiesterase probed by fluorescein-labeled inhibitory subunit. Biochemistry, 1990, 29, 2155-2161.	1.2	89
27	Modules in the Photoreceptor RGS9-1Â·GÎ²5L GTPase-accelerating Protein Complex Control Effector Coupling, GTPase Acceleration, Protein Folding, and Stability. Journal of Biological Chemistry, 2000, 275, 37093-37100.	1.6	86
28	Evolution-guided discovery and recoding of allosteric pathway specificity determinants in psychoactive bioamine receptors. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 7787-7792.	3.3	86
29	Knock-in human rhodopsin-GFP fusions as mouse models for human disease and targets for gene therapy. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 9109-9114.	3.3	85
30	Do Phosphatidylinositides Modulate Vertebrate Phototransduction?. Journal of Neuroscience, 2000, 20, 2792-2799.	1.7	83
31	TRP channel gene expression in the mouse retina. Vision Research, 2011, 51, 2440-2452.	0.7	83
32	Co-expression of GÎ²5 Enhances the Function of Two GÎ³ Subunit-like Domain-containing Regulators of G Protein Signaling Proteins. Journal of Biological Chemistry, 2000, 275, 3397-3402.	1.6	79
33	The Nature of Dominant Mutations of Rhodopsin and Implications for Gene Therapy. Molecular Neurobiology, 2003, 28, 149-158.	1.9	78
34	The Retromer Complex Is Required for Rhodopsin Recycling and Its Loss Leads to Photoreceptor Degeneration. PLoS Biology, 2014, 12, e1001847.	2.6	75
35	Activation of RGS9-1GTPase Acceleration by Its Membrane Anchor, R9AP. Journal of Biological Chemistry, 2003, 278, 14550-14554.	1.6	69
36	High-Affinity Triple Helix Formation by Synthetic Oligonucleotides at a Site within a Selectable Mammalian Gene. Biochemistry, 1995, 34, 7243-7251.	1.2	68

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37	GÎ²5â€“RGS complexes coâ€localize with mGluR6 in retinal ONâ€bipolar cells. European Journal of Neuroscience, 2007, 26, 2899-2905.	1.2	62
38	Membrane stimulation of cGMP phosphodiesterase activation by transducin: comparison of phospholipid bilayers to rod outer segment membranes. Biochemistry, 1992, 31, 9502-9512.	1.2	61
39	New mouse models for recessive retinitis pigmentosa caused by mutations in the Pde6a gene. Human Molecular Genetics, 2009, 18, 178-192.	1.4	61
40	Mislocalization and Degradation of Human P23H-Rhodopsin-GFP in a Knockin Mouse Model of Retinitis Pigmentosa. , 2011, 52, 9728.		52
41	Timing Is Everything: GTPase Regulation in Phototransduction. , 2013, 54, 7725.		51
42	Nucleotide exchange and cGMP phosphodiesterase activation by pertussis toxin inactivated transducin. Biochemistry, 1991, 30, 11637-11645.	1.2	49
43	Rhodopsin Gene Expression Determines Rod Outer Segment Size and Rod Cell Resistance to a Dominant-Negative Neurodegeneration Mutant. PLoS ONE, 2012, 7, e49889.	1.1	49
44	Activation-dependent Hindrance of Photoreceptor G Protein Diffusion by Lipid Microdomains. Journal of Biological Chemistry, 2008, 283, 30015-30024.	1.6	48
45	Metabolizable 111in chelate conjugated anti-idiotype monoclonal antibody for radioimmunodetection of lymphoma in mice. European Journal of Nuclear Medicine and Molecular Imaging, 1986, 12, 455-460.	2.2	47
46	Multiple Zinc Binding Sites in Retinal Rod cGMP Phosphodiesterase, PDE6Î±Î². Journal of Biological Chemistry, 2000, 275, 20572-20577.	1.6	47
47	Structures of TRPV2 in distinct conformations provide insight into role of the pore turret. Nature Structural and Molecular Biology, 2019, 26, 40-49.	3.6	47
48	SPATA7 maintains a novel photoreceptor-specific zone in the distal connecting cilium. Journal of Cell Biology, 2018, 217, 2851-2865.	2.3	46
49	High-Efficiency Triple-Helix-Mediated Photo-Cross-Linking at a Targeted Site within a Selectable Mammalian Geneâ€. Biochemistry, 1996, 35, 10712-10719.	1.2	45
50	Enhancement of Phototransduction Protein Interactions by Lipid Surfaces. Journal of Biological Chemistry, 2000, 275, 3535-3542.	1.6	45
51	Structural and molecular bases of rod photoreceptor morphogenesis and disease. Progress in Retinal and Eye Research, 2016, 55, 32-51.	7.3	45
52	RGS proteins: Lessons from the RGS9 subfamily. Progress in Molecular Biology and Translational Science, 2000, 65, 341-359.	1.9	43
53	Two R7 Regulator of G-Protein Signaling Proteins Shape Retinal Bipolar Cell Signaling. Journal of Neuroscience, 2009, 29, 7753-7765.	1.7	43
54	Phosphorylation of RGS9-1 by an Endogenous Protein Kinase in Rod Outer Segments. Journal of Biological Chemistry, 2001, 276, 22287-22295.	1.6	40

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55	Localization and differential interaction of R7 RGS proteins with their membrane anchors R7BP and R9AP in neurons of vertebrate retina. Molecular and Cellular Neurosciences, 2007, 35, 311-319.	1.0	40
56	Chronic cold exposure increases RGS7 expression and decreases Î±₂â€autoreceptorâ€mediated inhibition of noradrenergic locus coeruleus neurons. European Journal of Neuroscience, 2008, 27, 2433-2443.	1.2	38
57	Intramolecular allosteric communication in dopamine D2 receptor revealed by evolutionary amino acid covariation. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 3539-3544.	3.3	38
58	Subcellular compartmentalization of two calcium binding proteins, calretinin and calbindin-28 kDa, in ganglion and amacrine cells of the rat retina. Molecular Vision, 2008, 14, 1600-13.	1.1	37
59	Mutations of the Opsin Gene (Y102H and I307N) Lead to Light-induced Degeneration of Photoreceptors and Constitutive Activation of Phototransduction in Mice. Journal of Biological Chemistry, 2010, 285, 14521-14533.	1.6	36
60	How a G Protein Binds a Membrane. Journal of Biological Chemistry, 2004, 279, 33937-33945.	1.6	35
61	Clearance of Intravitreal Moxifloxacin. , 2006, 47, 317.		34
62	Phosphatidylinositol-3-phosphate is light-regulated and essential for survival in retinal rods. Scientific Reports, 2016, 6, 26978.	1.6	34
63	Hot on the Trail of TRP Channel Structure. Journal of General Physiology, 2009, 133, 239-244.	0.9	33
64	[35] Enzymology of GTPase acceleration in phototransduction. Methods in Enzymology, 2000, 315, 524-538.	0.4	31
65	Î²2-Adrenergic receptor activation mobilizes intracellular calcium via a non-canonical cAMP-independent signaling pathway. Journal of Biological Chemistry, 2017, 292, 9967-9974.	1.6	31
66	Defining the layers of a sensory cilium with STORM and cryoelectron nanoscopy. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 23562-23572.	3.3	31
67	High Affinity Interactions of GTPÎ³S with the Heterotrimeric G Protein, Transducin. Journal of Biological Chemistry, 1996, 271, 12919-12924.	1.6	30
68	Biosynthesis of the Unsaturated 14-Carbon Fatty Acids Found on the N Termini of Photoreceptor-specific Proteins. Journal of Biological Chemistry, 1996, 271, 5007-5016.	1.6	30
69	Phagocytosed photoreceptor outer segments activate mTORC1 in the retinal pigment epithelium. Science Signaling, 2018, 11, .	1.6	29
70	Tokay Gecko Photoreceptors Achieve Rod-Like Physiology with Cone-Like Proteinsâ€. Photochemistry and Photobiology, 2006, 82, 1452.	1.3	29
71	Electrostatic properties of myoglobin probed by diffusion-enhanced energy transfer. Biochemistry, 1983, 22, 6247-6254.	1.2	28
72	Diffusion-enhanced lanthanide energy-transfer study of DNA-bound cobalt(III) bleomycins: comparisons of accessibility and electrostatic potential with DNA complexes of ethidium and Acridine Orange. Biochemistry, 1985, 24, 3060-3069.	1.2	28

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73	Triplex Targets in the Human Rhodopsin Geneâ€. Biochemistry, 1998, 37, 11315-11322.	1.2	27
74	Targeted expression of the dominant-negative FGFR4a in the eye using Xrx1A regulatory sequences interferes with normal retinal development. Development (Cambridge), 2003, 130, 4177-4186.	1.2	27
75	Efficient mutagenesis of the rhodopsin gene in rod photoreceptor neurons in mice. Nucleic Acids Research, 2011, 39, 5955-5966.	6.5	27
76	MTORâ€initiated metabolic switch and degeneration in the retinal pigment epithelium. FASEB Journal, 2020, 34, 12502-12520.	0.2	27
77	Intensely Luminescent Immunoreactive Conjugates of Proteins and Dipicolinate-Based Polymeric Tb(III) Chelates. Bioconjugate Chemistry, 1995, 6, 88-92.	1.8	26
78	Identification of Protein Kinase C Isozymes Responsible for the Phosphorylation of Photoreceptor-specific RGS9-1 at Ser475. Journal of Biological Chemistry, 2003, 278, 8316-8325.	1.6	26
79	Enhancement of Phototransduction G Protein-Effector Interactions by Phosphoinositides. Journal of Biological Chemistry, 2004, 279, 8986-8990.	1.6	25
80	Electrostatic Steering at Acetylcholine Binding Sites. Biophysical Journal, 2006, 91, 1302-1314.	0.2	24
81	R9AP stabilizes RGS11-GÎ²5 and accelerates the early light response of ON-bipolar cells. Visual Neuroscience, 2010, 27, 9-17.	0.5	24
82	A novel reagent for labelling macromolecules with intensely luminescent lanthanide complexes. Tetrahedron Letters, 1993, 34, 4141-4144.	0.7	23
83	Structure and dynamics of photoreceptor sensory cilia. Pflugers Archiv European Journal of Physiology, 2021, 473, 1517-1537.	1.3	23
84	Integrative subcellular proteomic analysis allows accurate prediction of human disease-causing genes. Genome Research, 2016, 26, 660-669.	2.4	22
85	Formation of Helical Protein Assemblies of IgG and Transducin on Varied Lipid Tubules. Journal of Structural Biology, 1999, 128, 119-130.	1.3	21
86	Tokay Gecko Photoreceptors Achieve Rod-Like Physiology with Cone-Like Proteins. Photochemistry and Photobiology, 2006, 82, 1452-1460.	1.3	21
87	Oligomeric State of Purified Transient Receptor Potential Melastatin-1 (TRPM1), a Protein Essential for Dim Light Vision. Journal of Biological Chemistry, 2014, 289, 27019-27033.	1.6	20
88	Determinants of Endogenous Ligand Specificity Divergence among Metabotropic Glutamate Receptors. Journal of Biological Chemistry, 2015, 290, 2870-2878.	1.6	20
89	Phosphoinositides in Retinal Function and Disease. Cells, 2020, 9, 866.	1.8	20
90	Psoralen Photo-Cross-Linking by Triplex-Forming Oligonucleotides at Multiple Sites in the Human Rhodopsin Geneâ€. Biochemistry, 1999, 38, 12850-12859.	1.2	19

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91	Domain Organization and Conformational Plasticity of the G Protein Effector, PDE6. Journal of Biological Chemistry, 2015, 290, 12833-12843.	1.6	18
92	Critical Role for Phosphatidylinositol-3 Kinase Vps34/PIK3C3 in ON-Bipolar Cells. , 2019, 60, 2861.		18
93	Super-resolution microscopy reveals photoreceptor-specific subciliary location and function of ciliopathy-associated protein CEP290. JCI Insight, 2021, 6, .	2.3	17
94	Defective development of photoreceptor membranes in a mouse model of recessive retinal degeneration. Vision Research, 2006, 46, 4510-4518.	0.7	16
95	A Large Endoplasmic Reticulum-Resident Pool of TRPM1 in Retinal ON-Bipolar Cells. ENeuro, 2018, 5, ENEURO.0143-18.2018.	0.9	16
96	Distribution of RGS9â€2 in neurons of the mouse striatum. Journal of Neurochemistry, 2010, 112, 651-661.	2.1	15
97	Functional and Structural Studies of TRP Channels Heterologously Expressed in Budding Yeast. Advances in Experimental Medicine and Biology, 2011, 704, 25-40.	0.8	15
98	Targeted Generation of DNA Strand Breaks Using Pyrene-Conjugated Triplex-Forming Oligonucleotides. Biochemistry, 2008, 47, 6279-6288.	1.2	14
99	Multiphoton adaptation of a commercial low-cost confocal microscope for live tissue imaging. Journal of Biomedical Optics, 2009, 14, 034048.	1.4	14
100	Selectivity and Evolutionary Divergence of Metabotropic Glutamate Receptors for Endogenous Ligands and G Proteins Coupled to Phospholipase C or TRP Channels. Journal of Biological Chemistry, 2014, 289, 29961-29974.	1.6	14
101	Nonsense mutations in the rhodopsin gene that give rise to mild phenotypes trigger mRNA degradation in human cells by nonsense-mediated decay. Experimental Eye Research, 2016, 145, 444-449.	1.2	14
102	Topical Mydriatics Affect Light-Evoked Retinal Responses in Anesthetized Mice. , 2010, 51, 567.		13
103	Nicotinic Acetylcholine Receptor Channel Electrostatics Determined by Diffusion-Enhanced Luminescence Energy Transfer. Biophysical Journal, 2006, 91, 1315-1324.	0.2	12
104	Low Affinity Interactions of GDPÎ²S and Ribose- or Phosphoryl-substituted GTP Analogues with the Heterotrimeric G Protein, Transducin. Journal of Biological Chemistry, 1996, 271, 12925-12931.	1.6	11
105	From Molecules to Behavior. Neuron, 2003, 38, 853-856.	3.8	11
106	Rhodopsinâ€"EGFP knock-ins for imaging quantal gene alterations. Vision Research, 2005, 45, 3445-3453.	0.7	11
107	Three-Dimensional Architecture of Murine Rod Cilium Revealed by Cryo-EM. Methods in Molecular Biology, 2015, 1271, 267-292.	0.4	11
108	Abrupt Onset of Mutations in a Developmentally Regulated Gene during Terminal Differentiation of Post-Mitotic Photoreceptor Neurons in Mice. PLoS ONE, 2014, 9, e108135.	1.1	11

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109	Purification, Reconstitution on Lipid Vesicles, and Assays of PDE6 and Its Activator G Protein, Transducin. , 2005, 307, 289-314.		10
110	<scp>LRRTM4</scp> is a member of the transsynaptic complex between rod photoreceptors and bipolar cells. Journal of Comparative Neurology, 2021, 529, 221-233.	0.9	10
111	Dependence of RGS9â€“1 Membrane Attachment on Its C-terminal Tail. Journal of Biological Chemistry, 2001, 276, 48961-48966.	1.6	9
112	Characterization of R9AP, a Membrane Anchor for the Photoreceptor GTPase-Accelerating Protein, RGS9-1. Methods in Enzymology, 2004, 390, 178-196.	0.4	9
113	Biochemical Cascade of Phototransduction. , 2011, , 394-410.		9
114	Acceleration of Key Reactions as a Strategy to Elucidate the Rate-Limiting Chemistry Underlying Phototransduction Inactivation. , 2003, 44, 1016.		8
115	Evaluating Retinal Toxicity of Intravitreal Caspofungin in the Mouse Eye. , 2010, 51, 5796.		8
116	Loss of Class III Phosphoinositide 3-Kinase Vps34 Results in Cone Degeneration. Biology, 2020, 9, 384.	1.3	8
117	Recurrent high-impact mutations at cognate structural positions in class A G protein-coupled receptors expressed in tumors. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	8
118	Rgs9-1 Phosphorylation And Ca2+. Advances in Experimental Medicine and Biology, 2002, 514, 125-129.	0.8	7
119	Differential epitope masking reveals synapse-specific complexes of TRPM1. Visual Neuroscience, 2018, 35, E001.	0.5	6
120	Subcellular localization of mutant P23H rhodopsin in an RFP fusion knock-in mouse model of retinitis pigmentosa. DMM Disease Models and Mechanisms, 2022, 15, .	1.2	6
121	RGS Function in Visual Signal Transduction. Methods in Enzymology, 2002, 344, 724-740.	0.4	5
122	The mGluR6 ligand-binding domain, but not the C-terminal domain, is required for synaptic localization in retinal ON-bipolar cells. Journal of Biological Chemistry, 2021, 297, 101418.	1.6	5
123	Study of biological macromolecules by diffusion-enhanced lanthanide energy transfer. Journal of the Less Common Metals, 1989, 149, 143-160.	0.9	4
124	The ocular toxicity and pharmacokinetics of simvastatin following intravitreal injection in mice. International Journal of Ophthalmology, 2017, 10, 1361-1369.	0.5	4
125	Residues and residue pairs of evolutionary importance differentially direct signaling bias of D2 dopamine receptors. Journal of Biological Chemistry, 2019, 294, 19279-19291.	1.6	3
126	Molecular Biology of Vision. , 2012, , 889-903.		2

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127	Defining the Layers of a Sensory Cilium with STORM and Cryo-Electron Nanoscopy. SSRN Electronic Journal, 0, , .	0.4	2
128	Regulation of Photoresponses by Phosphorylation. , 2008, , 125-140.		1
129	Safety and Pharmokinetics of Triamcinolone Hexacetonide in Rabbit Eyes. Journal of Ocular Pharmacology and Therapeutics, 2008, 24, 197-205.	0.6	1
130	Nanosecond Motions Of Genetically-Engineered Antibodies: Structural Elements Controlling Segmental Flexibility Defined By Time-Resolved Emission Anisotropy. , 1988, 0909, 108.		0
131	More answers about cGMP-gated channels pose more questions. Behavioral and Brain Sciences, 1995, 18, 492-493.	0.4	0
132	Electron Cryo-Tomography of Cilia-Associated Structures of Rod Photoreceptors. Biophysical Journal, 2011, 100, 338a.	0.2	0
133	Structural Basis of TRPV2 Channel Gating Investigated with cryo-EM. Biophysical Journal, 2016, 110, 25a.	0.2	0
134	G Proteins.Ravi Iyengar , Lutz Birnbaumer. Quarterly Review of Biology, 1991, 66, 333-333.	0.0	0
135	Phototransduction in Vertebrate Rods and Cones. , 2020, , 261-274.		0